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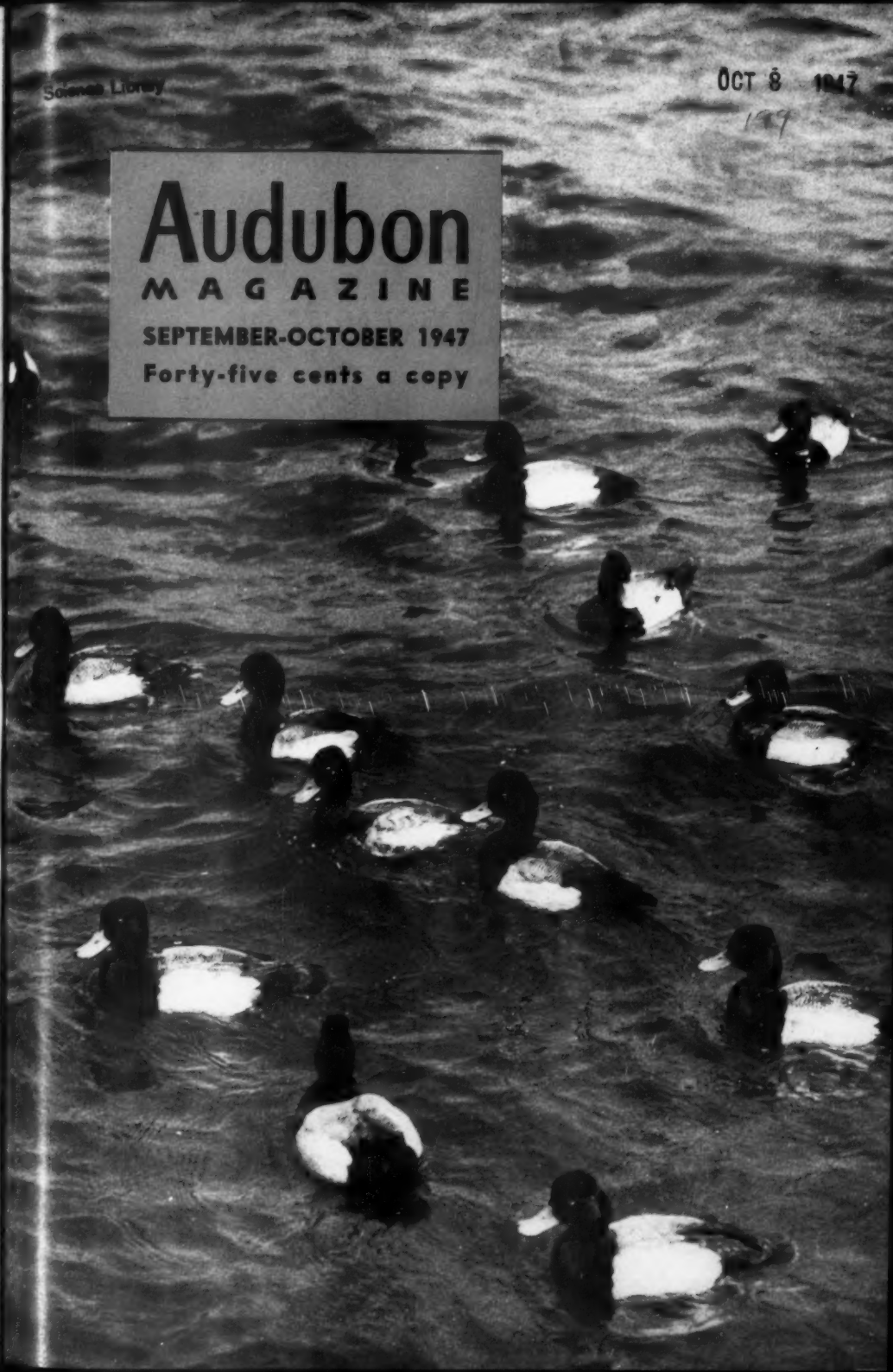
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SEPTEMBER-OCTOBER 1947

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# Audubon MAGAZINE

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**A BIMONTHLY MAGAZINE DEVOTED  
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**"Eight White Fronts." By Peter Scott,  
courtesy Arthur H. Harlow & Company**

**A FAMOUS ENGLISH ARTIST  
AND AUTHOR, SPECIALIZING  
IN BIRD LIFE, REPORTS TO  
AMERICA. MR. SCOTT SAILED  
IN PRE-WAR OLYMPICS, LATER  
SERVED IN BRITAIN'S NAVY**



# SAVING *the* WATERFOWL in BRITAIN *and* EUROPE

—By Peter Scott—

SINCE the end of World War II there has been in Britain a greatly increased interest in the study of birds. Existing bird-watching societies are inundated with new members, and new societies are springing up all over the country; bird books are selling like hot cakes, and more and more people are visiting bird sanctuaries. Ornithology seems to provide at once a contrast to the years of war and an escape from the disillusionment of the post-war world. So there is a "boom in birds."

Already this is reflected in legislative plans. For example, the whole principle of wild bird protection, whereby only birds on a special list are protected, has been under review and an alternative proposal has been put forward for a special list of birds which are not protected. There are new proposals, too, for a system of national parks and nature reserves throughout the country. But the British Parliament is very busy—some think too busy—with other legislation, and it will inevitably be a number of years before these measures are put before it. Meanwhile, there is, and always will be, a need for bird sanctuaries organized by enterprising societies and private individuals. Many of these are doing great work in Britain but many more are needed.

Apart from a few breeding species, such as the kite, which require close protection, probably the most urgent need is for special sanctuaries for Europe's declining waterfowl. Happily, the situation is not so serious as it is in the United States. One of the reasons may

be the continued existence of sporting rights vested in the ownership of land, for there are still many estates (although fewer than heretofore) in which waterfowl find virtual sanctuary. All the same, if ultimate disaster is to be averted, steps will have to be taken at once to see that the decline is arrested.

The European migratory waterfowl problem, though less acute, is much more complicated than the same problem in North America, because so many countries are involved, and it is, of course, extremely difficult to reach agreement on the best protective measures. Since the decline has been less rapid than it was in North America, it has been less easy to demonstrate that the decline does, in fact, exist. More information is urgently needed about the European ducks and geese, and, in order to get it, those principally concerned have sought to establish special Field Study Centers from which experimental research on Britain's wildfowl can be carried out. This includes plans for increasing the opportunities for banding ducks and geese in Britain and other European countries.

An example of the development of this theme is the newly formed Severn Wildfowl Trust, which is being regarded as a pilot scheme for the proposed National Waterfowl Reserves. The Severn Wildfowl Trust has been established on a marsh, in the western part of England, on which three to five thousand wild geese and five to ten thousand ducks annually spend the winter. The Trust has three main activities: the first is to

study the wild geese, under conditions unique in the British Isles; the second is to catch and band wild ducks in a special and ancient device known as a duck decoy, which was built there over 100 years ago; and the third is to keep and to study a comparative collection of live waterfowl both for research and educational purposes.

The wild geese arrive on the Severn estuary towards the end of September in small numbers, which slowly increase until mid-December, when hard weather on the Continent of Europe brings large flocks of some thousands strong to feed on the salt marshes and to roost on the wide sandbanks of the river mouth. The birds remain until mid-March and then leave for their breeding grounds in the far north of Russia. The first geese to arrive in the fall are pink-footed geese, but they are soon followed by white-fronted geese, (the speckle-belly of the American duck-hunter). Throughout

the winter the vast majority are white-fronted geese but there are always a few stragglers of many other species, including some of the very rarest. During the past season 10 of the 13 kinds of British geese have been seen on the marsh and in past years the other three kinds have been recorded.

This marsh is unique for a combination of reasons. The geese are undisturbed over an area of about six square miles, which is large enough for them to remain within its bounds practically all through the winter. The 200-acre salting which is their principal feeding ground is bounded on the south side by a sea wall behind which observers can move freely from one observation hut to another without the knowledge of the geese. These observation huts are placed every 100 yards or so along a mile-and-a-half of bank and make it possible to study any part of the flock under ideal conditions of light (since the birds are

Canada geese

*Courtesy Arthur H. Harlow & Co., New York*





"Mallards by the Willows"

*Courtesy Arthur H. Harlow & Co., New York*

to the northward of the observer) while the geese are feeding, perhaps within three or four yards of the huts.

The huts are made of straw thatch and have windows consisting of horizontal slate of a width which can be varied, so that they are not more than an inch wide if the geese are very close, but can be opened if the geese are feeding farther out on the marsh. Here, then, the birds can be observed for many hours at remarkably close range and many new lines of study have been developed.

The trapping and banding of the geese is now being planned. Geese never have been banded in any numbers in Europe and experiments with large nets propelled by rockets are expected to produce startling results.

The duck decoy, a device for catching ducks, was originally introduced into England in the middle of the 17th century. The method has remained substantially unaltered ever since, so that the decoy now being worked by the

Severn Wildfowl Trust, which was built in 1843, is a modern but fairly typical example.

It consists of a shallow pool about an acre in size, lying sheltered in a spinney of trees. Radiating from the pool are four curved ditches which are known as "pipes." These pipes are about 70 yards long and become gradually narrower as they lead away from the pool. They are covered with a tunnel of netting stretched on hoops 15 feet high which span the water. This tunnel is open at the wide end near the pool, but closed by a detachable bag at the narrow end.

Along the outside of the curve of the pipe are a number of overlapping screens of red thatch, high enough to hide the decoyman from the ducks on the pool, but so laid out that at the critical moment he can show himself through the gaps in the overlapping screens to any ducks which may go in the pipe.

Being a secluded and undisturbed place, a decoy pool becomes the roosting

**Wood ducks  
by  
Peter Scott**

*Courtesy  
Arthur H.  
Harlow & Co.,  
New York*





Photographs on this page, supplied by Mr. Scott, show one of the pipes radiating from the pool of the Severn Wildfowl Trust. Above, a section of the pipe—a curved netting-covered ditch about 70 yards long—narrows as it leads from the pool.

At right, the narrow end of the pipe, closed by a detachable net. Note the decoyman standing at the left, hidden by a screen of reed thatch.

ground for several hundreds, even thousands of mallard, teal, widgeon and other ducks all winter through. The problem is to entice them from the pool into the pipes in which they can be caught. This is done by various means. The decoy is so constructed that the banks are vertical, and surmounted by a hedge: if the ducks wish to go ashore and sleep and preen in the sun they can only do so on the sloping grassy banks of the pipe. This method is called "banking." Another method is to feed (or bait) the pipe: in this case tame birds are trained to swim to the pipe in response to a whistle and lead the wild ones in with

them. It is interesting to note, in passing, that the word "decoy" comes from the Dutch *Eendekooi* which means "duck enclosure" and that the tame birds were known as decoy ducks because they lived in the decoy. In popular usage the word decoy has now been transferred from the woodland pool, by way of the ducks which lived in it, to the modern "bird or person used to entrap others" and more specifically, to a model duck used by duck hunters to draw in their quarry.

But the most ingenious method of enticing wild ducks under the netting of a decoy pipe is by "tolling" them with a small dog. Ducks will mob a small dog and follow it closely, provided it is retreating and provided that they think themselves safe from it by remaining on the water. The dog is trained to retire up the pipe appearing round the screens





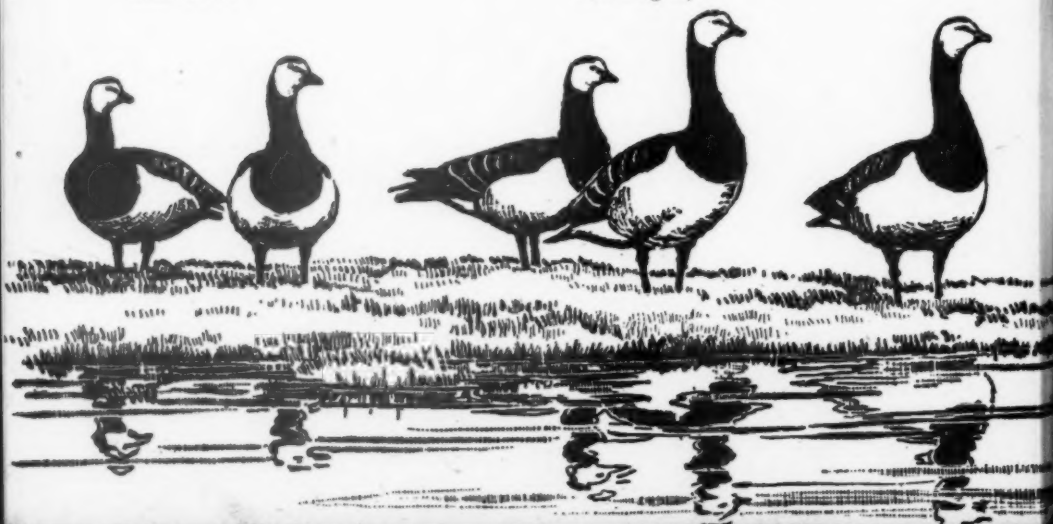
and disappearing again. By a combination of curiosity and bravado the ducks follow it. When they have been drawn well under the net—by whatever method—the decoyman creeps round behind the screens and shows himself at the mouth of the pipe. He is between the ducks and the pool and they rise at once and fly away from him, thinking, no doubt, to escape round the corner. But the pipe gets narrower and ends in the bag net or "tunnel net." They are hustled by the decoyman into this *cul de sac* and are caught.

In this particular decoy no less than 238 ducks were once taken at one drive, and the take in some decoys has been as much as 6,000 a year. For the most part, the ducks have been killed for food, but they cannot hold their own against such exploitation. Only some half dozen of the 200 or more decoys built in the British Isles are still being operated and two of these are now being used for banding for the study of migration routes.

In Holland many hundreds of thousands of ducks are still caught in the decoys for the export market. Although this amounts to one of their staple industries, the Dutch have recently curtailed their open season for catching, and enormously reduced the annual take. They too are alive to the danger of the extermination of the European waterfowl.

The third aspect of the work of the Severn Wildfowl Trust is the maintenance of a collection of live waterfowl. In the marshy fields adjoining the decoy wood are about 300 tame ducks representing some 50 species. There is much to be learned from the study of these birds, many of which breed well in these almost ideal conditions. But the collection also serves to interest people who would not otherwise have a chance of seeing these beautiful birds at close quarters. It is open to the public and hundreds of people have visited it. The birds are extremely tame, and many of them will feed from the hand. It is delightful to have a crowd of ducks and geese feeding round one's feet—emperor geese, Ross's, red-breasted, barnacles, bar-heads, lesser white-fronts, cinnamon teal, Bahama pintails, tufted ducks, geosanders and a host of others. Indeed, of the 28 species of the geese of the world only three are still lacking.

Such is the work of one particular organization in the struggle to preserve Europe's waterfowl. The efforts in Britain and in other countries in Europe have been greatly influenced by the measures which have been adopted in the United States and Canada. The sense of responsibility which prompted drastic legislation in North America is spreading in western Europe, and I am convinced that there is still time to avert the tragedy.



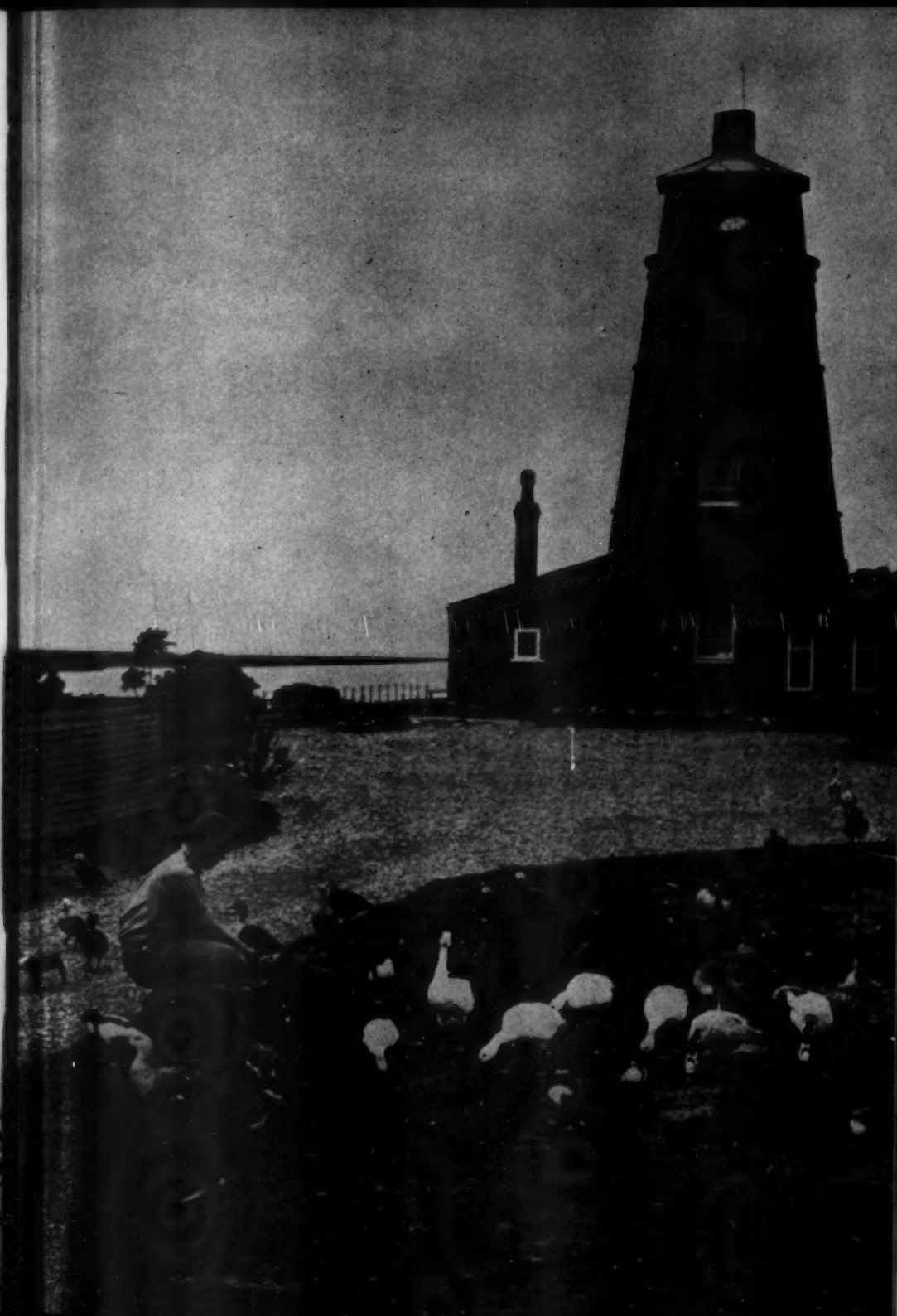


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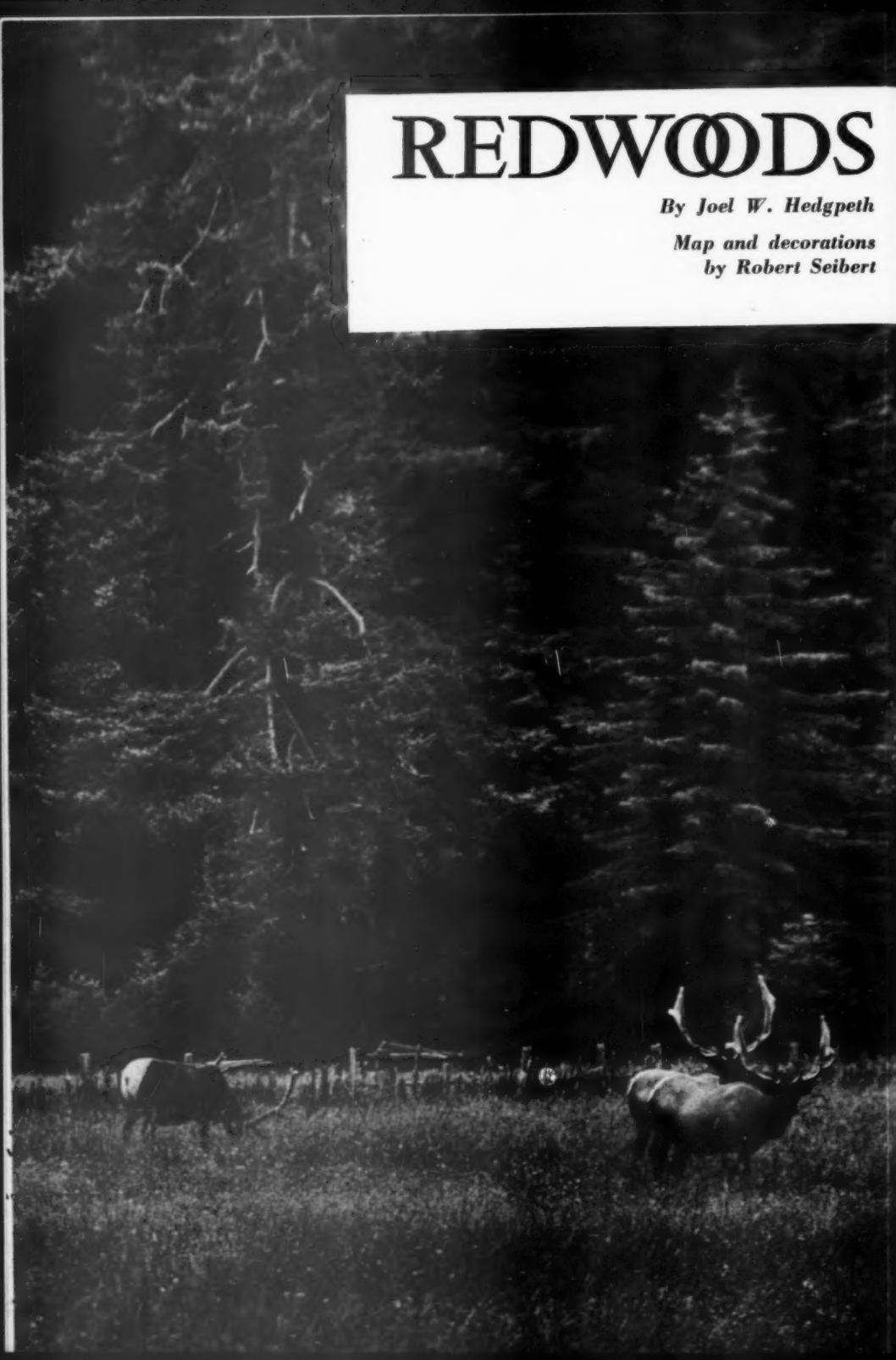
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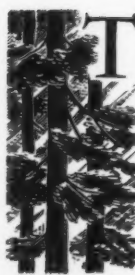


# REDWOODS

*By Joel W. Hedgpeth*

*Map and decorations  
by Robert Seibert*





**T**HE redwood groves are so overwhelming that our first reactions to them are ecstatic or banal, according to our individual disposition. But no one can take them for granted. They are so quiet that the shrieking of a jay is muted as soon as it is uttered, so still that the light falling down through the branches loses its impelling velocity to drift slowly among the dust motes and the ferns. The immensity of these colonies of huge trees, their prescience of eternity to our imaginative minds and their remoteness from the sunlit world, are beyond the hopes of poets or artists to describe.

A naturalist can do no better. He may write of the age of the redwoods, how they grow within reach of the ocean fogs, immune to the ills of other forest trees, how they are the survivors of a great host of ancient trees. Or he may clothe his description in formal botanical terms as precise as they are dull. Everybody has heard these things about the redwoods, but they mean nothing if the trees themselves have not been seen. The Frenchman who said of that pile of walls and towers on a hill in southern France that no one should die without seeing the place, would have forgotten his medieval relic had he stood in the presence of these trees. The thought that I may never see Carcassone does not disturb me. I have seen the redwoods.

It is the custom, in parks and camping places in the redwood country, to mark the butt of a fallen log or a cross section of a trunk with some of the events of human history spanned by the lifetime of that tree. Most of these events are battles and conquests; the Fall of Rome, the Norman Conquest, or the Hundred Years War. All the

histories and philosophies gathering dust in our libraries cannot preach as eloquent a sermon on the vanity of man as these few tags of history on the butt of a redwood log. And from the roots of that fallen tree new saplings are already growing. These new trees will grow for another millenium of human time, and their uninterrupted living substance will outlast another million books.

I have never cut down a redwood tree, and I would not like to have the death of something more than a thousand years old on my conscience. The fall of a great tree is an eerie, profane thing. There is a moment, after the cut is complete and the wedges are being driven in, when the tree stands on air. Almost imperceptibly the tip begins to move, and with a last smash at the wedge, the logger cries "Timber!" Then there is a cracking sound, a speeding of the tip at its outer arc and the moaning of the wind as the massive trunk breaks free of the stump and begins to fall toward the earth. It takes an eternity to fall, snapping the limbs of standing trees in its path before it reaches the earth with a shuddering noise and the cracking of its own branches beneath it. There is a cloud of dust, a springing up of unbroken branches along the fallen trunk, and silence.

We know in our hearts that this is a wicked thing, but we need lumber and must somehow make the best of it. Only in the last few years, within the lifetime of most of us, have we learned to lay our axes to a tree without destroying a whole forest. Yet too much of the ruthless logging that leaves the forest a waste of burned stumps and rocky ground still goes on. Setting aside groves out of respect for their great age and inspiring beauty is not enough to atone for cutting down the rest of the forest; we need more respect for a forest wher-

*Roosevelt elk in Prairie Creek  
Redwoods State Park. Photograph  
by Save-the-Redwoods League*

NATIONAL  
TRIBUTE GROVE

CRESCENT CITY

PRAIRIE CREEK  
STATE PARK

MILL CREEK  
STATE PARK

EUREKA

AVENUE OF THE GIANTS

HUMBOLDT  
STATE PARK

MONTGOMERY  
GROVE

MUIR WOODS

San Francisco

PORTOLA  
STATE  
PARK

N  
BIG BASIN  
STATE PARK

BIG SUR  
WOODS



Rob't. Seibert

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PACIFIC OCEAN

ever we find it. We are often reminded that we must be a part of a long line of living things that began with the naked protoplasm of the sea, but man himself is essentially a forest animal. His life, even today, would be impossible without trees and the things he makes from their wood. We should not forget this, nor fall into the delusion that we do not need to conserve our forests because our chemical industry will make wonderful new things out of coal and oil and cornstalks to replace wood. We cannot make things out of empty air, and the forest must provide much of the raw material for tomorrow's plastics.

Someday the coal mines will be exhausted, and the oil wells will run dry, but trees will grow as long as we are on earth if we treat them kindly. When we talk of tapping the sun's energy with mirrors, we forget how the trees are everlastingly turning that energy into wood. Unless we respect our trees for what they are, the providers of our technology, we may once again become simple peasants, sheepherders, and perhaps philosophers. Perhaps that would be best—for all of our technology we are as far from living like the creatures of wisdom that we fondly consider ourselves to be as our ancestors in the forests were.

Perhaps it is the half-expressed realization of our failure to improve on our life of those primeval days, as much as the sentimental love for beautiful trees or an ingrained memory of tree worshipping ancestors, that has inspired us to set aside the redwood groves. We have done so little that is worthy of our dreams—the least we can do is to protect a few trees whose growing life has seen all the recorded years of our miserable history, and visit them when the springs of our humility begin to run dry.

Unfortunately, some of these groves have become little better than city parks, with stores, soda fountains, restaurants, week-end cabins and dance pavilions cluttered among the bases of the trees. The silence of the groves is broken by

the squawking of automobile horns and the hootings of rude people to whom the sound of their own voices echoing in the forest is the sweetest music.

A few years ago—perhaps it is still there—a photoelectric cell was rigged to a phonograph in one of these groves. The unwary visitor, passing this trap, touched off a recording of "Trees," sung by a baritone. A very little of this sort of thing is too much, and if we would learn anything from the redwoods, we must avoid these unpleasant, civilized groves.

It is almost impossible to find a virgin grove of redwoods, a grove in which no tree has been cut or no underbrush cleared away for a path or road. Yet a grove left to itself soon erases the marks of man, for nothing can recover from man's depredations or the cataclysms of nature as the redwood can. Around every sawed off stump the young trees rise in a circle, trees with half their substance burned away still live, and the falling leaves pile up on the forest floor as they did for thousands of years before we came to this land.

There are many little groves, not far from the wide highways and neat little signs, where the rarest of the wild plants grow undisturbed, and the calls of the birds can be heard without the accompaniment of horns and phonograph records. In such groves there is no time, and human history is only an unhappy myth.

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*ONE soon becomes acquainted with new species of pine and fir and spruce as with friendly people . . . while the venerable aboriginal sequoia, ancient of other days, keeps you at a distance, looking as strange in aspect and behavior among its neighbor trees as would the mastodon among the homely bears and deers.*

John Muir, THE YOSEMITE

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NATIONAL  
TRIBUTE GROVE

CRESCENT CITY

PRAIRIE CREEK  
STATE PARK

MILL CREEK  
STATE PARK

EUREKA

AVENUE OF THE GIANTS

HUMBOLDT  
STATE PARK

MONTGOMERY  
GROVE

MUIR WOODS

San Francisco

PORTOLA  
STATE  
PARK

N  
BIG BASIN  
STATE PARK  
S

BIG SUR  
WOODS



Rob't. Seibert

PACIFIC OCEAN

OREG.  
CAL.



ever we find it. We are often reminded that we must be a part of a long line of living things that began with the naked protoplasm of the sea, but man himself is essentially a forest animal. His life, even today, would be impossible without trees and the things he makes from their wood. We should not forget this, nor fall into the delusion that we do not need to conserve our forests because our chemical industry will make wonderful new things out of coal and oil and cornstalks to replace wood. We cannot make things out of empty air, and the forest must provide much of the raw material for tomorrow's plastics.

Someday the coal mines will be exhausted, and the oil wells will run dry, but trees will grow as long as we are on earth if we treat them kindly. When we talk of tapping the sun's energy with mirrors, we forget how the trees are everlastingly turning that energy into wood. Unless we respect our trees for what they are, the providers of our technology, we may once again become simple peasants, sheepherders, and perhaps philosophers. Perhaps that would be best—for all of our technology we are as far from living like the creatures of wisdom that we fondly consider ourselves to be as our ancestors in the forests were.

Perhaps it is the half-expressed realization of our failure to improve on our life of those primeval days, as much as the sentimental love for beautiful trees or an ingrained memory of tree worshipping ancestors, that has inspired us to set aside the redwood groves. We have done so little that is worthy of our dreams—the least we can do is to protect a few trees whose growing life has seen all the recorded years of our miserable history, and visit them when the springs of our humility begin to run dry.

Unfortunately, some of these groves have become little better than city parks, with stores, soda fountains, restaurants, week-end cabins and dance pavilions cluttered among the bases of the trees. The silence of the groves is broken by

the squawking of automobile horns and the hootings of rude people to whom the sound of their own voices echoing in the forest is the sweetest music.

A few years ago—perhaps it is still there—a photoelectric cell was rigged to a phonograph in one of these groves. The unwary visitor, passing this trap, touched off a recording of "Trees," sung by a baritone. A very little of this sort of thing is too much, and if we would learn anything from the redwoods, we must avoid these unpleasant, civilized groves.

It is almost impossible to find a virgin grove of redwoods, a grove in which no tree has been cut or no underbrush cleared away for a path or road. Yet a grove left to itself soon erases the marks of man, for nothing can recover from man's depredations or the cataclysms of nature as the redwood can. Around every sawed off stump the young trees rise in a circle, trees with half their substance burned away still live, and the falling leaves pile up on the forest floor as they did for thousands of years before we came to this land.

There are many little groves, not far from the wide highways and neat little signs, where the rarest of the wild plants grow undisturbed, and the calls of the birds can be heard without the accompaniment of horns and phonograph records. In such groves there is no time, and human history is only an unhappy myth.

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*ONE soon becomes acquainted with new species of pine and fir and spruce as with friendly people . . . while the venerable aboriginal sequoia, ancient of other days, keeps you at a distance, looking as strange in aspect and behavior among its neighbor trees as would the mastodon among the homely bears and deers.*

John Muir, *THE YOSEMITE*

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## ABOUT THE REDWOODS

Length of Belt 450 miles

Average Width 15 miles

Original stand of Redwood  
1,600,000 acres (app.)

Area cut over to July 1, 1940  
624,000 acres

(Note: Area cut over since 1940; exact figures not available but cutting has been at accelerated rates)

Remaining stand of virgin  
Redwoods 976,000 acres (app.)

Rate of cutting, per year—1940  
8,000 acres

(Note: The rate of cutting has increased each year since 1940)

Estimated life of remaining stand—  
first growth Redwood  
50 years (est.)

## REDWOODS PRESERVED IN STATE PARKS

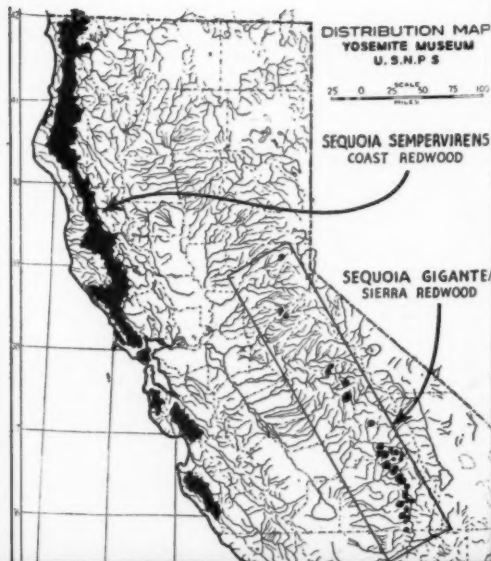
Big Basin State Red-  
wood Park, Santa  
Cruz County 10,000 acres

Humboldt and Del  
Norte State Red-  
wood Parks 40,859.76 acres

Other parks (State) 1,147.21 acres

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52,006.97 acres



# LITTLE KNOWN FACTS ABOUT THE "Big Trees"

By Charles Albert Harwell

They have a most astonishing resistance to fire.

They are practically immune from insect attacks.

They are practically immune from destructive fungi.

One Big Tree may produce a million seeds in a year.

Cones may stay on the tree for sixteen years and still contain fertile seeds.

Big Trees are in "flower" between February and April each year, sometimes as late as May.

Seeds mature in the fall of the second year.

The seed requires bare mineral soil for successful germination.

Twenty-four-year-old saplings have been known to bear cones but tests showed the seeds were infertile.

As a rule good seeds do not develop on trees less than about two hundred years of age.

The oldest Big Trees still produce fertile seeds.

Big Trees produce fertile seeds much later in life than do many other species of trees.

Approximately 15 in 100 of the seeds are fertile.

The seed is small, flat, and very light.

Seedlings grow slowly the first year, but make quite rapid development for two or three years thereafter.

They begin to branch vigorously the first year, and soon assume the pointed form of the young trees.

They were first seen by white men in 1833—by the Joseph Walker party within the present Yosemite National Park.

They were first made known to the world in 1852—Calaveras Grove discovered.

The first thing men did after discovery of these Big Trees was to cut down one of the finest. The stump was converted into a dance-pavilion, and the trunk was made into a bowling alley.

The Mariposa Grove was "discovered" by Galen Clark, 1857.

The first Grove given protection was the

Mariposa Grove, 1864. Congress set it aside as a park. President Lincoln signed the act.

One Big Tree may weigh as much as six thousand tons.

The root system of a Big Tree may spread over an area of between two and three acres.

The greatest diameter measurement of a Big Tree is 40.3 feet.

The tallest known Big Tree is 310 feet high.

Mature Big Trees have no tap roots.

The roots of Big Trees are rarely more than six feet below the surface of the ground.

There are around seventy groves of Big Trees in the world—all of them in California, on the west slope of the Sierra.

Their altitude range is from 3000 feet to 8400 feet.

It is thought that glaciers caused the separation of these Big Tree groves.

Great forests of redwood once flourished in many parts of the world.

About twelve species of fossil redwood have been discovered.

In North America, redwoods once grew in Texas, Pennsylvania, Colorado, Wyoming, Oregon, Washington, California, Canada, Greenland, Alaska, and St. Lawrence Island.

In Europe, redwoods once grew in France, Switzerland, Austria, Bohemia, Germany, England, and Spitzbergen.

In Asia, redwoods once grew in Manchuria.

Now only two species of the redwood genus are growing in the world—the Big Tree of the Sierra and the redwoods of the coast of California.

They are named Sequoia in honor of Se-quo-yah, a Cherokee Indian who made an alphabet for his people.

Oklahoma has placed a statue of Se-quo-yah in the Statuary Hall of the National Capitol in Washington.

Big Trees have been used in reforestation and as ornamentals in various parts of the world.

John Muir made an ink from the sap of Big Trees and wrote letters with it to friends from the Mariposa Grove. The writing seems to have faded little in sixty-five years.

I AM AN OLD TIME COUNTRY LANE  
NOW I HAVE BEEN  
OFFICIALLY VACATED and CLOSED

(I NEVER LIKED AUTOMOBILES ANYWAY)

I INVITE YOU TO WALK  
AS FOLKS HAVE WALKED FOR GENERATIONS  
AND BE FRIENDLY WITH MY TREES  
MY FLOWERS AND MY WILD CREATURES



—By Roberts Mann

WHAT'S wrong with city folks? Why is it that careless destruction and vandalism in our state parks of Illinois and Indiana, for instance, vary inversely with the distance from Chicago; or in Michigan, from Detroit? Administrators of public property in and near every metropolitan center gnash their teeth over the same problem. And there is a mounting organized antagonism between the urban industrial workers on the one hand, and the rural and small town agricultural workers on the other—a suicidal folly that can destroy our social-economic structure.

According to our 1940 census, 56.5 per cent of our population is urban and 85 per cent of that urban population lives

in 140 metropolitan centers like New York, Chicago and San Francisco. In each of them you will find thousands of kids who are utter strangers out-of-doors. The only animals they know are the dog, the cat, the English sparrow and the alley rat. They are at home only in the squalor and cacophony of the city block. Milk comes from bottles, meat from a market, bread from a bakery, and hay is something you holler. Soil is mud or dust. When they grow up, they vote. Most of them vote as they are told by corrupt and selfish leaders. Others vote as they are told by some newspaper. They have no roots; no sense of kinship with the land. What attitudes toward conservation measures can be expected from representatives elected by such votes?

Our basic problems of land use are involved. Most of our ills are problems of improper land use. Misuse, destruction and waste stem from intolerance. Intolerance stems from ignorance. The cure for ignorance is education.

Last summer a big Jewish welfare center in Chicago sent one of its six day-camp groups to a picnic center in our forest preserves in Cook County, Illinois, each Wednesday for eight weeks. The other four days per week they utilized their community center buildings or the Chicago parks. As an experiment, we were asked to provide a nature program.

There were 125 children of both sexes, from 5 to 11 years old, in that group. Our senior naturalist, Dr. David H.

# CITY FOLKS

## need roots in the land

*The Superintendent of Conservation of the Forest Preserve District, Cook County, Illinois, discusses one of the problems of our modern civilization*

Thompson, and an assistant naturalist, spent each Wednesday with them, taking successive parties of 25 on 45-minute field trips over a temporary nature trail. Each day ended with a "council ring" session where Dr. Thompson related a segment of a connected story of the Chicago region from the early geologic ages to modern times.

On the first day, most of those children and some of the high-grade adult counselors were afraid to sit on the ground *because of ants!* They asked what those things were, hanging on a tree, that looked "like pumpkins." They had never seen a hickory nut, nor an acorn. The trail led through a patch of giant ragweed in the river bottom and they might as well have been in the jungles of Africa.

I attended the concluding ceremonies on the last Wednesday, and arrived just at the close of the lunch period. Those kids were running up to Dr. Thompson and John Jedlicka, his assistant—and they came to me, whom they had never seen before—in a continual stream, with questions tumbling out of their mouths. They jubilantly exhibited weeds, leaves, mushrooms, pebbles, insects, mice, frogs, and even snakes. Their curiosity knew no bounds; they had lost all fear. And they jealously regarded that picnic center as "*our preserve.*"

If fifty per cent of the people in Chicago could be taught to feel that way, our job would be duck soup. If fifty per

cent of the people in America felt that way your job and mine would be simplified. We've got to get people out-of-doors; get them out on their feet, walking. We've got to make them feel at home there, and open their eyes. What little knowledge they have about things in nature is colored by misinformation and distorted by fear. We've got to teach them to be friendly with all living things, and demonstrate what *fun* they can have without destroying. We've got to teach them to be humble and tolerant; that man is only an animal that remembers; that everything in nature has its function and its right to exist.

The people must be enticed to use their own property and taught to use it wisely. We must *entice* them to look at nature. We must teach them perception. Aldo Leopold handed us that phrase, and he handed us another: it is our job to improve the quality of public use.

In the past, emphasis has been placed on the acquisition and management of important wilderness areas. Good. But now emphasis must be shifted to the acquisition of reasonably wild lands that will be *accessible to huge masses of urban people.* This poses new problems of wildlife management, land management, interpretation and education. We have a new frontier: the human mind. We need to sit down and hold hands with the sociologists.

Occupational changes which have taken man from all-round physical ac-



tivities out-of-doors and set him at indoor pursuits which at best require no bodily activities other than those involving the finer muscular and nerve coordinates—monotonous, repetitive and inexorable—leave him lopsided mentally as well as physically. Economic insecurity, the apparent futility of both material and moral husbandry, the mechanized accelerated tempo, have crippled the spiritual maturity which takes man "out of the cold slime of a brief existence on a trivial planet."

It becomes imperative that we segregate accessible areas of native landscape where city people may find peace and relaxation; where masses of humanity alien to the soil that supports them may find roots and the true perspective; where they have opportunity to learn the great and little truths of natural science. With that knowledge will come inevitably an appreciation of the factors which created their community, their state and this nation.

County or metropolitan parks and reservations have a definite function and a definite place in the recreational chain between the city playgrounds on one end and the superlative wilderness areas and national parks on the other. They serve as shock troops, absorbing the impact of great masses of underprivileged people—many of them unable to journey farther—and conditioning them for better future use and enjoyment of state and national parks and forests. The integrity of such areas must not be diluted; wildness is a necessity. Those cities farsighted and bold enough to set them aside for future generations will may regard them with jealous pride.

The story of the Forest Preserve District here in Cook County, Illinois, points up the many problems that are involved in providing a wild and semi-wild area for recreation of city folks, and the task of educating those folks to enjoy using it in a proper manner.

Cook County contains Chicago and 95 of its suburbs and the Forest Pre-

serve District now girdles the city with green. Some part of it can be reached in 30 minutes of travel by any one of the 4,250,000 people in that county—more than half of the population of Illinois. For thousands it is but a short walking distance to some preserve. No other city in America has a reservation of this type as large, as accessible, and as heavily used. Its holdings now exceed 36,800 acres—80 percent of it wild land; 60 percent of it forested. It is visited by approximately 15 million persons per year.

It is not a park, as that term is commonly understood, nor a group of outer parks. It is a forested sanctuary; a naturalistic reservation with recreational facilities for intensive use on its fringes. On the 17 Sundays and holidays from Memorial Day to Labor Day, the average attendance is 500,000 persons. Yet the interiors are truly wild and support wildlife populations notable for their diversity and density. There are marshes dotted with muskrat houses and teeming with waterfowl, with the tracks of mink, raccoon and 'possum on the shores. Wild deer and coyotes roam the Palos hills.

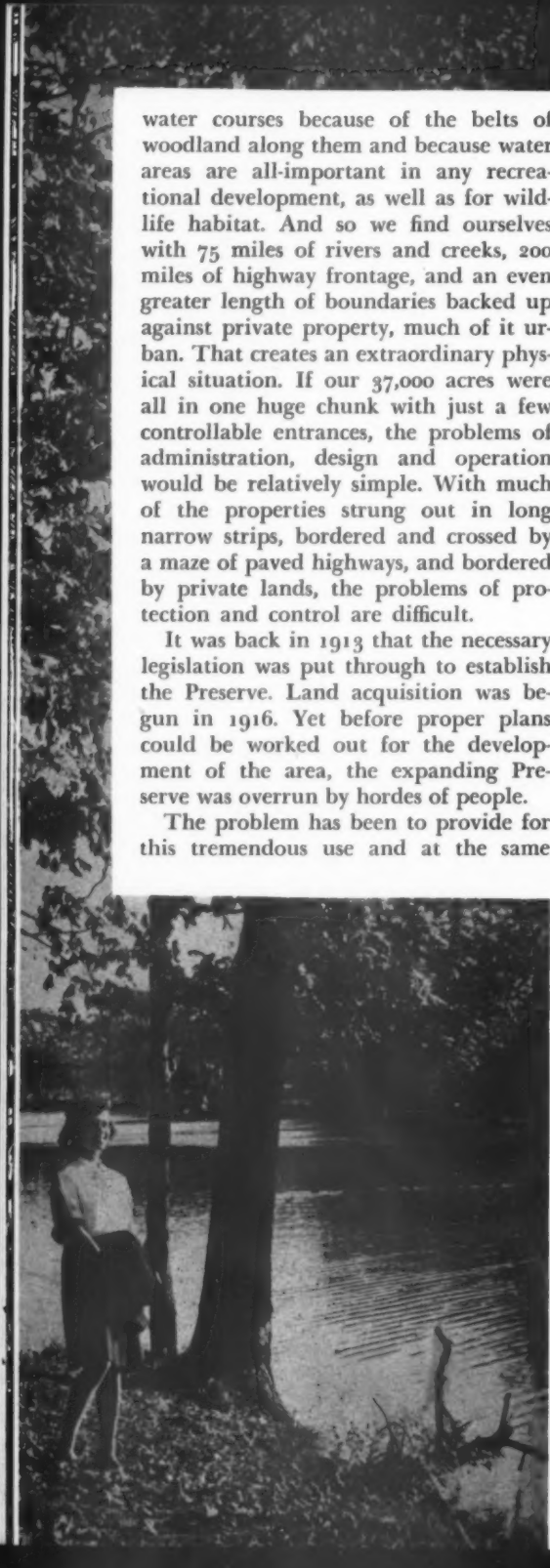
The District lies, roughly, in a great outer belt around Chicago. Some of its holdings lie within the corporate limits of Chicago; others within or adjacent to many of the 95 suburbs that crowd upon each others' heels along the radiating railroads and highways. Much of its acreage is strung out in narrow irregular strips along the five major water courses that placidly wind through the flat terrain. There is a big block of 8500 acres in the low Palos hills, twenty miles southwest of the "Loop." There are several isolated holdings, including seven that vary from 300 to 1700 acres in area.

Most of Cook County was originally marsh land or wet, gently rolling prairie with a few isolated upland groves: a heritage of the Wisconsin glaciation, one lobe of which terminated in southern Cook County. With these exceptions, acquisition naturally followed the major





*Photograph by Sturm for The Chicago Sun*



water courses because of the belts of woodland along them and because water areas are all-important in any recreational development, as well as for wildlife habitat. And so we find ourselves with 75 miles of rivers and creeks, 200 miles of highway frontage, and an even greater length of boundaries backed up against private property, much of it urban. That creates an extraordinary physical situation. If our 37,000 acres were all in one huge chunk with just a few controllable entrances, the problems of administration, design and operation would be relatively simple. With much of the properties strung out in long narrow strips, bordered and crossed by a maze of paved highways, and bordered by private lands, the problems of protection and control are difficult.

It was back in 1913 that the necessary legislation was put through to establish the Preserve. Land acquisition was begun in 1916. Yet before proper plans could be worked out for the development of the area, the expanding Preserve was overrun by hordes of people.

The problem has been to provide for this tremendous use and at the same

time preserve the unspoiled natural features of the environment for enjoyment by future generations.

The solution has been the development of a sufficient number of comparatively small areas, strategically located along the highway borders, for intensive use; and rigid protection of the interiors against encroachment by fire, the automobile and excessive human use. These intensive-use areas we call picnic centers.

There are 115 major picnic centers and 50 smaller ones; 4 golf courses and 3 outdoor swimming pools. So far, with but two exceptions, even the major picnic centers provide only the simplest of facilities. In each, the number and distribution of facilities depends upon the capacity of the area for people and its convenience to public forms of transportation. Use-studies of each area are made to determine the character and amount of use it will support without permanent deterioration. There is for every scenic unit, dependent upon its character, size and ecology, a definite point of human saturation beyond which its values of spaciousness and beauty are lost, both temporarily when the crowd is present and permanently because maintenance cannot repair the damage.

Each picnic center has one or more parking spaces with a car capacity governed by the number of people the area can comfortably accommodate. There is plenty of pure water from wells with hand pumps or from bubbler fountains. There are the necessary sanitary facilities ranging from simple privies to modern flush toilets. There are picnic table-and-bench combinations in specified quantity, and a number of small steel picnic stoves. There may or may not be an open shelter with huge fireplaces. Usually, there are one or more concrete dance platforms, flush with the ground in shaded spots. There is an open area for games—perhaps a soft-ball diamond. That is all. There are no indefatigable recreation directors buzzing about nor any of the facilities for the special ac-

tivities that more properly belong in the city park or playground.

To entice the public to visit the wild interiors, 175 miles of trails have been constructed. These are multiple-purpose trails serving hikers, bicyclists, equestrians and our fire-fighting and maintenance equipment. They are well drained and are surfaced with cinders where moisture factors and heavy use require it. Equestrian travel has become a headache requiring excessive trail maintenance, patrol, and the licensing of over 3000 horses from stables located on private property convenient to the trails, ridden by 21,453 licensed equestrians.

Wildlife management consists largely of absolute protection and letting nature alone to work out her own checks and balances. Lakes, ponds and marshes have been built or restored wherever topography permits. In the Palos region there are now 86 such water areas totaling 1027 acres. There has been some habitat improvement where we plan to reintroduce ruffed grouse, or prairie chicken—species once native here. But no food patches or artificial feeding; no restocking; no predator control. None is needed.

Three large water areas have been set aside for fishing and others will be added. By applying the most advanced techniques of management, these have been brought to the point where one 55-acre lake yielded 11,000 pounds of game and pan fish last year to 8,000 anglers fishing from the banks or from the fleet of rowboats available for rental. Fishing is a recreation that smooths out the wrinkles in a tired mind.

The major use of the preserves, however, is by picnickers. I sometimes think Chicago is the picnic center of the universe. Racial, religious, industrial or political picnics of 500, 1000, and even 20,000 are common. We issue 7000 permits annually to picnic groups reserving specific areas and facilities. The number of small group picnics and family group



**"Picnic  
center  
of the  
universe"**



picnics, for which no permit is necessary, is increasing.

The majority of these picnickers come out to eat, drink, dance, play games, make love and go home at sundown—no wiser than when they came. Some come to bask in the sun or lie in the shade. Few venture beyond the picnic centers into the interiors. They are incurious. They are apathetic. Or they are afraid—literally afraid. Great masses of the American people do not know how to enjoy themselves out-of-doors. As trustees of public lands it is our job to teach people how to use and enjoy their own property intelligently. The problem is how to tickle their bumps of curiosity so as to arouse their interest in natural objects, natural phenomena, and the wildlife that grows, crawls, swims, flies and runs.

We have found that nature appreciation, engendered by nature lore acquired first-hand, is the key to the door opening upon a concept of the broad field of conservation. That concept is essential to good citizenship, wise use of public property, wise use of all our natural resources. An intangible by-product for the individual will be a fuller richer life.

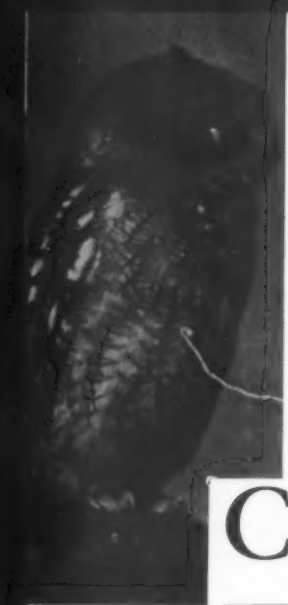
City folks need roots in the land.

Damage to trees shown in photographs at left, opposite page, reveals what happens when a boy untrained in woodlore finds an axe in his hand. Fungus or insects will destroy the hacked trees.

But don't blame the boy, says Mr. Mann. Axes are not permitted in the Chicago preserves and are confiscated when found. But eleven boys who cut down or mutilated trees were not arrested. Instead, as shown in the picture at the right, they and other members of their "club" planted 200 young saplings under the direction of a Boy Scout leader being trained in reforestation. "You can bet your bottom dollar," says Mr. Mann, "that none of them will ever again mutilate a growing tree."







# The OWL *who went to* College

— By Virginia Orr

SCREECH owls never stray far from their home territory—not as a rule, that is—but I knew one who became a hitch-hiker.

It all started one Christmas vacation when I found him along a highway. Obviously the victim of a hit-and-run accident, he looked, from a distance, like a dirty, spattered rag, lying there in the gutter. A closer view was even less attractive, for one eye was gone and blood was caked to his feathers. But boric acid, food and shelter can do wonderful things. By the end of the week, my one-eyed friend was hopping about the room, snapping and hissing at the pettiest annoyances. Within another week he was flying to my hand for food and, shortly after that, he went to college with me.

My college was narrow-minded about the kind of livestock that you could keep in dormitories. Goldfish and small turtles were tolerated, but other creatures were denied sanctuary. The rule book read: no dogs, no cats, no canaries, no ducks or chickens, no rabbits, no mice (not even white ones) no guinea-pigs. The list was remarkably thorough and although it did not include owls, I was sure that emergency legislation

would be enacted should such a bird appear.

Every precaution was used in smuggling Wotan, for so he was named, to my room. Hidden in a wicker basket, graced with a scarlet ribbon, Wotan passed off as a gift of fruit. His perch was in my suitcase; his evening meal, wrapped in wax-paper, was in my hand-bag. Perhaps I was overcautious, but he reached my room undetected and unsuspected.

Being a rather impractical person, I first planned to keep him in the top of my closet as all owls like to perch rather high, but I soon abandoned this idea for obvious reasons. Still, the closet was the safest place from the eyes of the ever-investigating house-mother and not too trustworthy acquaintances. So his perch finally was placed upon a bed of newspapers on the closet-floor and he was tied by a leash that was long enough to reach his pan of water and short enough to keep him from my clothes which were suspended from the ceiling by an ingenious (if I do say so myself) method of wiring. An unobtrusive piece of wood glued to the door-jam kept the door from closing tightly.

Although I could buy scraps of raw meat at a shop in the village, Wotan, like all other birds of prey, needed frequent meals of bones and fur to clear out the mucous in his stomach and supply an abundance of calcium to his diet. So I started on a violent career of "sudden death" to all mice on the campus. Armed with ten mouse-traps, I roamed the fields and woods in the evening and returned in the morning with a hapless mouse or two secreted about my person—in pockets, cap or even note-book. I had considered starting my campaign in the dormitory but decided that the risk of catching a poisoned mouse was too great and, besides, it might arouse suspicion. As it turned out, Wotan was much fonder of the nocturnal deer mice than of any other kind, and as these were most abundant, I was able to keep him well satisfied.



But what were we to do about exercise? I allowed him to fly loose in my room whenever I was there alone, but it was too small for sustained flights. To take him outside, via the fruit-basket route, seemed unwise to try too often.

The solution occurred to me one night when I had studied very late. Between three and four in the morning, the corridors were deserted by all but the night-watchman, who made the rounds every hour, and so it happened that at this crucial time each morning, the owl busily flew up and down the long halls in response to my soft whistles. We had one near-discovery, when a girl stepped into the hall just as Wotan fluttered by. I quickly rounded the corner with the owl close behind me and the poor girl was so stupified with sleep that she never realized we were there.

I was perpetually amazed that we were not discovered while exercising, or through my nefarious trap-line, but our closest call came through something entirely different. One night, in the middle of February, Wotan became quite vocal. It is spooky enough to waken to the mournful quavering of one's own pet screech owl, but try to imagine the feelings of my next-door neighbor, who had no idea the bird existed. Fortunately she was made of stern stuff and had little faith in college plumbing, upon which she heaped the blame for her nightly disturbances.

I tried frantically to stop my little friend's serenades. At first bright lights silenced him, and I slept for a week with all my lamps burning merrily and a stocking tied over my eyes. He soon became adjusted to this situation, however, and sang as loudly with the lights on as off. Salvation came in the form of a mid-year vacation. By the time Wotan and I returned to school again, he had ceased his singing.

It was not long after our holiday that Wotan had company. The occasion was the "prom" week-end, when a kindred

spirit from Cornell arrived with his trained red-tailed hawk. Of course, we could find no place to keep his pet, except in my room so I moved out and the hawk moved in.

After seeing the hawk feed on a whole dead pigeon, I was afraid she might start feeding on my owl, so I wedged the closet door securely and tied the hawk's chain to the leg of my bureau, which was pushed to the opposite side of the room. In spite of these precautions, I fearfully returned to my room the next morning, half expecting to see tiny Wotan the victim of a hawk murderer. Fortunately naught but pigeon feathers and newspaper littered the floor



*When contented, Wotan melted into a little ball, with only an eye and a beak to show where his head was.*

and Wotan serenely peeked through the crack of the closet door at the monstrous red-tail. The episode ended happily when I smuggled the hawk back down the fire-escape. With the departure of our guest, things smoothed out considerably until we departed for home.

After several months at home, I was forced to admit that Wotan had become quite used to the lack of an eye. Where he used to slightly under or overestimate the distance to his perch, he now flew directly to it. If a dead mouse were jerked across the floor by a string, he pounced on it with unerring accuracy. I felt more and more guilt at keeping him in captivity. Finally, I decided to let him go. In order to get him as wild as possible and thus strengthen his chances for survival, I stopped hand-feeding and allowed him the freedom of our rather sizeable basement and playroom. Here he stayed for several weeks, catching dead mice that I pulled across the floor and finding his own hiding places. He became remarkably proficient at both but most especially at the latter. When perched among the logs by the fire-place, he erected his ears and stretched himself until he looked just like a jagged, wooden stub; when he was hidden in the dark recesses of a closet or a coal bin, he became a soft, furry ball that melted into the black-

ness. Regretfully I decided that he was wild enough, and took him outside one evening, tossed him into the air and went quickly back inside before either of us could change our minds. I saw him for the last time the following evening, just before he flew off to his home country, fifteen miles away.

One might think that this was the end of my story about the owl that traveled two-thousand miles, back and forth to college. But no. Two years later, I saw his picture in the Sunday newspaper!

It seems that on a cold November night, a truck had engine trouble in Wotan's home woods. After fixing the trouble (so I gathered from the paper) the driver left the hood open for a few minutes in which time Wotan flew down to the warm engine to toast his toes. Returning in the dark, the driver closed the hood without seeing the bird, and drove on to Chicago. When he went to check his engine, upon arrival, there was the grease-spattered, one-eyed owl solemnly staring at him.

I wish that I could go on with the story from there and say that he returned to his home and lived happily ever after, but beyond this, I do not know what happened to him. I can only hope that all went well with my widely-traveled, collegiate friend, Wotan.

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## A PLACE *for* MUSING

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By Eric W. Bastin

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HAVE you noticed how a man will return, and again return, to a favorite spot that attracts him? Sometimes it is a fine view that attracts, but, perhaps more often, it is the lure of pleasant retrospection. I have known men, accustomed to a stroll in the cool of the evening, perhaps with a dog for company, who would pause invariably

at the same stile, the same farmer's gate or on the same bridge, to lean their elbows on its rail and light a fragrant pipe. The retired fisherman or sailor, the shore-bound seaman, leaning on the sea-wall in the same beloved spot, pipe in mouth, eyes scanning the ocean, is a familiar figure in any sea-side town, almost any evening. Sentiment, memory,

recollection have strong drawing powers for the out-of-doors man.

There is a bridge I have in mind that attracts me. It is not one of your great, towering spans of steel, a spiderweb against the sky; not a mighty structure of granite pylons and abutments, cantilever arches and four-lane roadways; it has neither the breath-taking immensity of the Golden Gate bridge nor the hallowed sanctity of some ancient European bridges; it is just a plain, rather small, strictly utilitarian, functionally efficient railway bridge.

It carries a single railway line across a sluggish, weed-choked creek deep in the heart of Ontario's rich Dundas Valley. It is a wood-and-concrete structure and its great, square barks of timber still are aromatic with the smoky tang of creosote. In its stern strength, its simple, severe lines and its scornful lack of ornamentation and fussiness lies, partly, the appeal to my imagination. Mainly, though, I have come to regard my little bridge as a favorable vantage point for nature study, for one may sit there, with the creek winding slowly by a foot or two below, its banks lined by twisted, sprawling willows, a fair-sized, healthy woodlot behind one's back and the tang of the nearby marshes in the breeze. It is quiet in that secluded spot, for I have never seen a train use the line, and seldom have I met other wanderers in the neighborhood of the creek.

I like to recall how peaceful and calm I found that spot early one Sunday morning in mid-September. It was barely half-past seven when I approached my bridge, and there was a silvery mist that rolled low over the dark waters of the creek. Beads of dew glistened on every leaf and twig; the early sunlight streamed fitfully through the willows, casting long, shifting shadows into the mist. It was a scene to delight an artist, a scene to enjoy and store away in one's memory.

As I drew near there was a sudden



*Do you, too, have a favorite place for musing? (Photograph by Cruickshank)*

splash; I heard a rustling of wings and caught a glimpse of ungainly, orange-colored legs drawn up hastily as a green heron winged his way down into the quiet bends of the creek towards the marsh; "Little Fly-up-the-Creek," they called him, I mused. I had surprised him at his early morning fishing, and did not see him again that day.

There were busy hummingbirds along the railway line that autumn morning and noisy blue jays. It was funny, I pondered, how almost every writer on birds referred to the jay as "noisy"—but, after all, it is true—he is one of the noisiest of our feathered creatures.

I sat on the deck of the bridge, legs dangling over the stream. To rest awhile was good, for I had walked for nearly an hour. The nearby bushes were alive with interesting birds, for two catbirds were not far off and there was a house wren almost within reach of my hand. In a blaze of crimson a male cardinal flashed across the creek, soon to be lost in the shady depths of the hedgerow. As the sun climbed, grew stronger and warmer, the chorus of birds' songs swelled more cheerfully than ever; it was fine to hear their tiny voices blend.

Sometimes birds of a very different type fly over that spot. There was an evening last summer when the hideous, whining roar of a Harvard training plane filled the sky for ten minutes while its pilot steered the gaudy, orange-

colored craft through a program of dives, loops and rolls.

On a bright, warm Saturday afternoon last October I made my way down the ties towards the bridge. I had paused to watch a hermit thrush hiding in the bushes alongside the track, when I caught the sound of shrill, boyish voices from the direction of the creek. Without a sound I crept nearer; soon I was on the bridge, still unobserved by five little ragamuffins who were very busy at a farmer's fence twenty or thirty yards away. Two of the little tykes—none of them could have been more than eight or nine years old—were in the farmer's field, struggling to push enormous pumpkins over the low fence to their partners-in-crime. I said, "struggling," for the pumpkins were nearly as big as the boys.

Back to the railway track they traipsed, rolling their pumpkins ahead of them. They squatted on the rails, and, still without seeing me, watched while their leader took out a pen knife and proceeded to hollow out and carve his pumpkin into a fiendish face.

It was time, I thought, to announce myself, and proceeded to do so with a discreet cough. There was a momentary panic as five faces turned towards me in unison; the empty pumpkin was pitched back into the field, the others were left lying on the ties as the urchins scampered away headlong for Dundas.

*"Little Fly-up-the-Creek" by Olin S. Pettingill, Jr.*



I lingered long on the bridge that lovely afternoon, for there were muskrats swimming in the creek. I watched the careful, methodical actions of one as he crossed the stream, climbed its bank, dripping wet, crept to a patch of tall weed-stems, selected the one he wanted; he then chewed its base until it fell, took it in his mouth by its center, headed back to the water and swam across, to disappear under a tangle of

driftwood and logs by the other bank. In a moment he was back in view, to repeat the errand again and again.

It was growing cooler; the sun was sinking beyond the willows. Half-past six . . . I rose, stretched, and started home. Turning back at a slight sound, I stole a last look towards the marsh as a pair of wood ducks took wing and disappeared downstream. . . . It had been a satisfying afternoon.

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## BIRDS *are human too*

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By Alan Devoe

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**B**IRDS and animals are not people, of course. Or are they?

No one but a few incorrigibly anthropomorphic sentimentalists presumably supposes that the consciousness of a flicker is just like the consciousness of a man, or that human ideas and concepts occur in the minds of woodchucks and flying squirrels. In the realm of intellectuality, clearly enough, we human beings are a species alone. In all the great area of spiritual awareness, moral judgments, and the responsibility that comes with self-consciousness . . . in all *that* part of the life-experience, of course, birds and animals are certainly not people, nor anything like them. Only the grossest kind of misunderstanding could make possible such a confusion.

But the rational-intellectual part of us is, after all, only one part. We acquired it at the end of a long evolutionary history, and we acquired it not so very long ago. It is the part of us that Thoreau used to call the "top-head," meaning a kind of late addendum upon an immense and very much older substructure of psychic equipment. Our "top-head" makes us a creature set apart from the rest of nature, and unique. But all the great other and earlier part of ourselves—our emotional life, our basic drives, our spontaneous activities, our

immediate responses to the life-experience, when we are not exercising our "top-head" to pass critical judgments or make meditative analyses—in all this old and enormous area of ourselves we are completely the brother of flickers, woodchucks, flying squirrels, and all the rest of the animal community.

It is common to the idiom of many primitive peoples to call animals by some such name as the "children" of nature. The term has a good deal of scientific exactness, as well as the charm of naivete. For birds and animals are "people" in very much the same way that little children are. A three-year-old is not a deliberative logician; and neither is a woodchuck. A youngster does not have a clear understanding that he is a self, nor accurately understand the causal relationships of things, nor have the gift of looking into the future and into the past and seeing himself caught up in a world of time. Nor does a fox or a crow have such endowments. They are things that come later, with the "top-head" of human maturity. But foxes and crows and human youngsters have altogether in common the spontaneities of living. They share the immediacies of glee, dejection, excitement, anger, love, and quick response to all urgings of the moment. They share the kind of sensori-



motor insight, as it were intuitive, which is an earlier thing than analytical understanding.

Animals are not people, no. Not if we mean the reflective and self-conscious people of maturity. But John Burroughs put it well and fairly when he said that they are our childhood come back to us.

In theory, of course, we human adults use our rational minds to correct and restrain and variously discipline the behaviors to which our old animal-spontaneity is constantly urging us. When a misfortune occurs, we summon (in theory) a whole rational array of cool-headed considerations, and refrain from howling. When our animal spirits come bubbling and welling up in us on a golden October morning, we remember (or at least we are supposed to do so) that a certain kind of decorum is the only approved behavior for respectable civilized citizens, and we refrain from rolling ecstatically on the grass like a joyful horse. But, at that, our old animal spontaneities are continually escaping control. It doesn't do any *good*, we know, to kick the chair we have just stumbled over; but who of us has not done it? It is a sadly non-intellectual thing, no doubt, when we have had a vexing experience at the office, to "take it out on the dog;" but we do it. Top-head or no top-head, what golfer is there who, having dubbed a simple shot, has never slung his club whizzing off into the nearest woods or water-hazard?

When we do things like that, of course, we are returning to our childhood. And we are returning to our animality. We are back in that world where to feel is immediately to act. Though it may make us feel a little foolish afterward, it does give us the momentary ease of escape from the tight confines of rationality. It is no wonder we experience such a fellow-feeling when we see in operation the uninhibited "childishness" of animals.

A day or two ago I watched the child-mind of a pair of starlings at work.

Though the incident had an ending which, as a rational conservationist, I am obliged to regret, the "humanness" of it—meaning its likeness to our human behavior at its most spontaneous and deplorable—was fascinating. Starlings are human too. They are you and I and the man next door, the way we are down deep inside.

The starlings had nested in a hollow in a dead maple. I had been disturbed, when they first came, lest they might molest the other nesting birds of the vicinity. But they made no trouble; none at all. Having found immediately a nest-site to their liking, they had settled in it and made no move whatever to bother any of the neighboring birds. The peace of Eden prevailed, starlings harmoniously included. Robins had a nest with five eggs on the cornice outside my window. Two nests of phoebes were thriving in the barn. A family of indigo buntings prospered in the blackberry tangle. Quietly and amiably the starlings were integrated in all this.

Until the other day.

It was a windy day, and I was watching the tossing of the trees. Abruptly—crack!—the old dead maple tree, where the starlings lived, snapped at its base and toppled. When it struck the ground, it broke in fragments. Five starling fledglings were spilled out on the earth and killed.

The two parent starlings huddled for a moment on a piece of the splintered trunk, dazed by the catastrophe. Then they began a cackling and clattering of shock and fury. Their world had been smashed to pieces. It was too much to bear.

In instant and apparently simultaneous decision, they took to the air. Straight as arrows, they flew together to the cornice outside my window. Screaming and scrabbling, in a frenzy of emotional release, they pitched all the eggs out of the robins' nest, tore the nest into tiny pieces, and hurled the whole thing to the ground.



*Photograph by ALAN D. CRICKENHART*

Well-mannered as long as things go well, a starling in distress will punish the neighbors for his own unhappiness—a trait familiar in human psychology



For some reason you will find that the yellow-throated vireo, whose habitat is the high treetops will be more abundant than the red-eyed, that occupies a similar niche. (Red-eyed vireo, above, by Eliot Porter. Yellow-throated, at right, by S. A. Grimes)

Fall is the time to pick a census area  
—winter is the time to map it, so that  
you will be ready when spring comes.  
You can start right now by reading

## How to Take a Breeding-Bird Census

by *Richard H. Pough*



The red-shouldered hawk can be said to be abundant if one pair is present to the square mile; while the ovenbird could not be called abundant unless there were some 300 pairs to the square mile. (Hawk by S. A. Grimes. Ovenbird by F. N. Wilson)



# How to Take a Breeding Bird Census

—By Richard H. Pough—

YOU don't have to be an expert to take a breeding bird census—but once you get launched as a census taker, you will find in a few years that you have become an expert. It's like anything else—the more experienced you become, the more you will enjoy it; and a census produces records that are a valuable contribution to ornithology.

Censusing is simplified during the nesting season by the fact that most birds establish a definite territory, and carry on practically all their breeding season activities within it. Any members of their species that trespass are quickly driven out so only the resident pair are encountered within its limits.

Since it is always difficult to find more than a small proportion of nests, we assume that each singing male, resident on a fixed territory, indicates the presence of a breeding pair and, by inference, a nest and a brood of young. The male's song is given almost continually during the early part, if not all through the breeding period, and makes him easy to detect and locate accurately. In effect, he is saying to other males of his species: "Here I am. This is my home. I won't stand for trespassing."

Although a female does not necessarily join every male, the number of territorially established but unmated males is small, and the ratio to the total population is fairly constant. When comparing the population of one area with another, or year-to-year populations, they cancel out. We must recognize, however, that the error is present in all censuses taken on the sole basis of singing males. This error, which

is on the high side, is undoubtedly less than the error that would occur on the low side, if a pair were not counted unless both members or their nest could be found.

If you wish to get the most out of a census, choose your area with the idea of solving a specific problem:

(1) Find the normal bird population of one of the stable climax plant communities of your region and the population fluctuations that occur from year to year among the various species that normally inhabit it. We know today, for instance, that there is a regular 8-10 year cycle of increase and decrease among ruffed grouse, but little is known concerning cyclic population fluctuations among most birds.

(2) Chart the changing population of an area rapidly being altered through plant succession—a crop field that has just been abandoned for further cultivation, or an area from which the timber has just been cut. Here, over a period of years, you will have a chance to record the changing bird population as one plant community after another obtains dominance and then gives way in turn to another—each a step closer to the ultimate climax. We still know very little about bird-population densities in the many different successional as well as climax-wildlife communities that occur in North America.

(3) Find the difference between two areas, not too widely separated, that are identical except for a single factor. You can provide the factor of difference yourself by doing things like removing all the dead trees from one area, or putting up an abundance of bird boxes; or you could establish summer feeding or maintain an artificial supply of water. Other tests may concern:

The effect of the presence or absence of running water.

The effect of annual burning as compared to an unburned area.

The presence or absence of cattle or other grazing animals in a woodland or on a prairie.

The difference between woodlands where DDT or other insecticides have and have not been sprayed.



## HOW TO CHOOSE AN AREA

Regardless of the particular kind of problem you may want to solve, be sure to keep certain things in mind when picking an area:

(1) Choose one that lies wholly within a single community type, if possible. Because edge effect (the increased population found where two dissimilar communities come together)\* the boundaries of the area should lie well within the chosen type. (Edge effect, itself, is an interesting study and if you wish to work on it, choose an area with but one edge between two clearly defined community types and extending deep enough into each type to give some idea of the normal populations of each as well as the abnormally high one along the zone of contact.)

(2) Be sure that your area is compact and as large as possible. If too small or narrow, it will include only part of the territory of many of your birds. A fairly solid block of not less than 20 acres is about the minimum that will produce reasonably accurate results, and 40 acres is much better. In difficult terrain, however, 40 acres represents about all that one person can handle unless full time can be devoted to the project.

(3) Choose an area close to your home, if possible, since you should go over it at least two mornings a week, and occasionally in the evening. The area should not be too close to a highway, railroad or airport, as censusing is done largely by car and disturbing sounds will cause you to waste a lot of time.

(4) The past land-use history of your area should be available and its future should be ascertainable. (Prepare a written account of its

past land-use history). If possible, pick an area to which you can return year after year so that your censuses can have a definite continuity. The area does not have to remain undisturbed, but be sure that the future planned for it will not interrupt your studies. In many cases, activities such as lumbering (provided you first get several good annual censuses) will only add interest to your study by revealing the changes in the bird life which follow.

A local vegetative cover or soil map or an air photograph of the region\* may help you to find just the right area. In any case, if an air photograph is available, mark your area on it as part of your initial documentation of the study tract. Otherwise, mark its location on some suitable large-scale local map.

## KEEP A PERMANENT RECORD

Remember that all of your records are going to be valuable to you, and to others, for years to come. So start out right in the beginning, to keep your records in permanent form. A heavy board cover, 3-ring notebook, 8½" x 11" in size, makes a convenient holder to keep your material together. Label the cover and make a title page. Keep your air photo or map (trimmed to the proper size) your notes, work sheets and other data in this notebook. Since this is your permanent record, do not take it into the field.

## HOW TO LAY OUT THE GRID

The simplest way to insure uniform coverage of an area and accurate mapping of

\* See *Breeding Birds of the Forest Edge in Illinois* by V. R. Johnston.

\* Get a U. S. Geological Survey Key map to find out if one is available and from whom.

A simple observation based on sight or sound, sex undetermined.

①

Same as above but sex determined.

① ♂

A singing male (presumably on territory).

①

A bird fussing as though nest were near.

①

A bird carrying nest material.

①

An actual nest, contents unknown.

①

## Suggested Activity Symbols For Use In Breeding Bird Censuses\*

A nest with three eggs and one young.

3E 1Y

A juvenile bird out of nest begging food or being fed.

①2

Light pencil lines are used to connect aural observations with the point from which they were made, as distance may be in error but direction is probably quite accurate.

①

A wavy line is used to connect records of singing males heard more or less simultaneously.

①

Dashed lines are used to indicate observed travel of a bird.

①

Direction in which a bird flew off an unknown distance.

①

\* The numeral is the trip number, i. e. date when the observation was made.

its bird population is to lay out on it a grid composed of two sets of parallel lines intersecting at right angles.

For the interval between lines, I favor 208' 8 1/2", which produces square units of exactly one acre. But more important, it means that as you work the lines you will come within 104' of any singing bird. This interval is close enough to enable you to hear every species I know of, yet it keeps

as long as you can see his stake. When he has driven in the stake, move up to it and send him on ahead again. In some places, you may have to sight his stake as he holds it overhead, or sight below the intervening shrubbery by lying on the ground yourself.

If the cover is dense and brushy, it may be necessary to cut a narrow sighting lane through it. Such cutting has a negligible effect on the environment, and you will need this lane, later, for walking the line when making a census.

#### Corners by measurement

When you have measured off the first 208' interval, put in a stake, mark a tree, or otherwise fix this, your second corner. Keep marking the intervals until you come to the boundary opposite the one on which you started, or until you have gone as far in that direction as you wish your grid to extend. Then run similar lines out at right angles at each of your 208' corners, and your grid is established.

#### Corners by intersections

If you find it easier to run compass lines than to measure 208', measure these intervals only on the first of the lines you lay out at right angles to your base line. The other corners can then be established by running out lines from the 208' points on this line parallel to the original base line. Your corners will fall where the two sets of lines intersect. Two full days' field work should enable you to complete a 40-acre grid.

#### Corner code

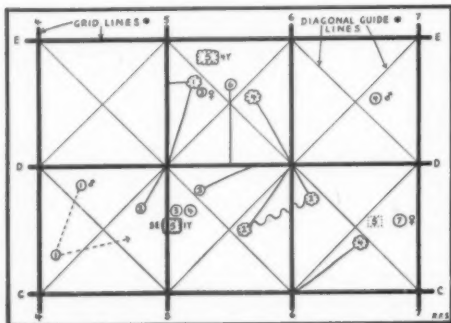
It is a good idea to number your north-south lines up or down from one end, and letter your east-west lines in from one side or the other. This gives you a symbol like A2 or C7 with which to designate each corner.

#### Extra guide posts

If you are working in thick cover, mark the halfway points—each 104' or even more frequently blaze a tree (on sides as well as front and back) with paint to show the course of the line. Such marks are especially useful at points where your lines cross trails, streams, or stone walls. Give a tree on the line a vertical streak of paint, those to the right or left a diagonal streak sloping down on the side toward the lines, and mark the 104' intervals with a cross.

### AREA MAP FOR EACH SPECIES

After your grid is established, make a detailed map of the area. Take a blank sheet with your grid lines drawn on it and pace out the exact location of streams, stone walls, edges of cover types, large trees, etc. (It helps to make a pacing scale



\* Grid and diagonal lines are printed or inked in. All other lines are pencil notations.

Section of towhee work sheet showing use of symbols.

your lines far enough apart to minimize confusion caused by birds beyond the adjoining line. The lines themselves should always be magnetic north and south and east and west—that is, compass directions.

#### Locating the base lines

Determine the maximum extension of your area in any one of the four major compass directions and start your first base line from there. Mark this point well and as permanently as possible so that another census-taker, (going over your area, say, fifty years from now to see what changes have taken place), can locate the starting point. If this cannot be permanently marked, show the exact location on your grid map of some permanent landmarks such as rock outcrops, bodies of water or hills. In a pinch, a future census-taker could work backward from these landmarks and relocate your old lines.

#### Running the lines

Once you have your starting point, run a straight compass line and mark the 208' intervals. In good terrain, the intervals can be paced, but measuring by steel tape or a rope is more accurate. In thick cover, send a man ahead with a colored stake and keep him on the line through the compass sights

on a piece of cardboard, i.e., mark off intervals that, on the map, are equal to 10, 20, 40 of your paces on the ground.)

Experience indicates that one inch to 104'-4 1/2" is a good scale for your map. This means that each acre is 4 square inches in area. Where birds are abundant, you will find that you need this much space in making your field notes. A block of 20 such units fits nicely on an 8 1/2 x 11 sheet of note paper and, depending on the size and shape of your area, one to three such sheets should cover it.

You will want a separate map for each species, so prepare a supply before you start censusing. Sheets 8 1/2 x 11, ruled off into 20 squares with ink, or printed on an duplicator, are practical. Place an index tab on the bottom of each to aid in turning quickly to the sheet for a given bird.

You may find it helpful to draw faint diagonal lines through each square. These establish the center and help you estimate angles more accurately when putting down the direction from which a song is coming.

A few important landmarks can also be put in, or if you prefer to keep your work sheets uncluttered, fasten a more detailed

map of the area, showing the relation of various landmarks to the grid, inside the hinged cover of your note holder.

## GET AN EARLY START

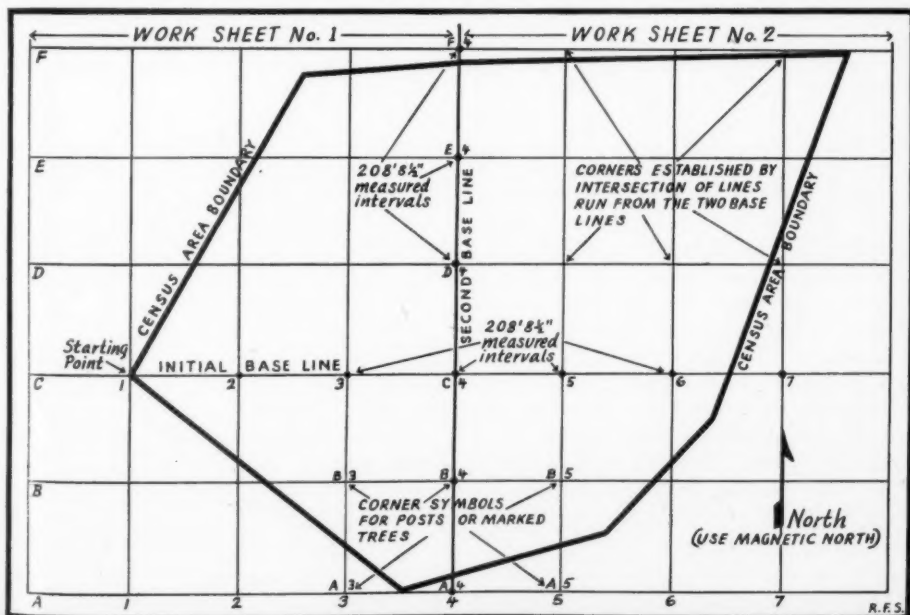
Many a nesting owl, hawk or crow has been missed by failure to spot the nest before the leaves are out and many other birds are missed through failure to get them when engaged in courtship or territory defense, and hence conspicuous.

Remember a bird sings more, and is more active in defending its territory, after it first arrives and while other members of its species are still in migration and continually trespassing, than it is later on when busy with nest and young.

Don't worry about the fact that some of the birds you record will be migrants; they never appear on subsequent censuses and so can readily be eliminated. Of course, species that are only migrants in your region can be ignored.

Also, don't make the mistake of stopping too soon. If such late nesters as goldfinches and waxwings occur in your area, be sure to take a census or two in July or early August so that you won't miss them.

A census area with an arbitrary boundary, fitted onto two 20-unit work sheets, showing in detail the steps followed in laying out the one acre unit grid on the ground



## A USEFUL NOTE-TAKING METHOD

Note taking is an important part of making a census. My method is based on the fact that I am a poor judge of how far away a singing bird happens to be. Also, birds sometimes sing loudly at one time and softly at another.

In the field I spend as much time as possible at my grid corners. When a bird sings I look in the direction of the song and before it stops I try to pick out a tree or other landmark in line with the song. First I determine its approximate direction from me, using a compass if necessary. Then, turning to the map for that species, I draw a light pencil line from the place where I am standing to where I judge the bird to be. At that point I place the trip number and the appropriate symbol. With practice you can determine the direction from which a song is coming with considerable accuracy. Actually in practice, I only attempt to determine it to approximately one of the 16 major compass directions.

If you are working your lines fairly rapidly, as you should, the bird will probably sing again from about the same place, while you are at the next corner. This time you can put the symbol where the new direction line, drawn from the second corner, crosses the earlier one, or its extension. If your original distance guess was wrong the earlier symbol had best be erased. You may get several more bearings from other corners to further verify the exact location of the bird's chief singing area.

No opportunity to record a new bird should be lost and any time a new song is heard you should do your best to get its location down on the map whether you are at a corner or not. Presumably you are on a known grid line and can estimate your position between corners with reasonable accuracy.

The accuracy of this triangulation method has been demonstrated more than once. It has helped me locate ruffed grouse drumming logs from a distance of from 600' to 700'. After hearing the distant drumming from a number of corners on my grid, and

finding my bearing lines all intersecting at about the same point, I have gone there and have seen the grouse.

Throughout all this process, you need never see the birds at all. At first, however, you should verify all songs that are at all unfamiliar by direct observation of the singing bird. The reason why a breeding-bird census is so easy, even for a beginner, is that you work with a limited number of species and there is ample opportunity to learn every song by heart. If you are in any doubt, spend the first few days in the area just learning the songs of the local birds.

In the case of a few abundant species with closely squeezed territories, such as red-eyed vireos or ovenbirds, it is often necessary to supplement the straight running of the lines with more intensive work on individual pairs.

After I have finished running one set of grid lines, (i.e., north-south or east-west) which I try to do before the morning song period wanes, I cruise around at random through the area listening for the most significant thing the census-taker can hear—two birds of the same species singing simultaneously. These individuals I enter on the map and then I connect the symbols with a wavy line to indicate that they definitely refer to two different birds and not to the same bird on the move. Such records are very helpful in determining how many pairs of an abundant species are in the area.

Unfortunately, there are as yet very few tables to which you can refer to find out what is a normal or reasonable territory for any given species to be occupying\*. If such tables were available, they would help you avoid the mistake of lumping the territories of two pairs into one, or breaking one territory into two or more.

In the case of a bird that sings continually and pays little attention to a person on the ground, such as the red-eyed vireo, you can often follow an individual bird around to see how much territory it ranges over. With a dotted line, you can indi-

\* See Table 19 in "A Guide to Bird Watching" by Joseph J. Hickey.

cate its route on your map. As you work with the same birds, trip after trip, you will find that in some cases you can distinguish the song of a particular individual. If you can, it greatly facilitates the job of delimiting its exact singing territory.

Your ability to do this sort of random scouting will depend on how well your lines are marked. You should be able to pace due north, or any other compass direction, and know at once when you come to the boundary of the acre you are in. If you then pace the line to a corner, you can tell if it says A-7 just where you were. This is facilitated in thick cover if you have brushed out your lines a bit, and have

marked the line trees on all sides, or have tied cloth strips along the line.

This means that your north-south and east-west lines must be equally well marked. This also makes it possible to census along either set. Better coverage is obtained if you alternate between them, using the north-south set one trip and the east-west set the next.

## ALTERNATIVE NOTE-TAKING METHOD

Some census takers prefer not to carry their species maps into the field. They feel that having to constantly turn from one

## YOUR FIELD EQUIPMENT

1. **NOTEHOLDER:** Aluminum, 9 x 11½ inches with a spring clip at the top to hold your sheets and a hinged cover to protect them.
2. **SPECIES MAPS:** Your full set with index tabs across bottom.
3. **SHARP PENCIL AND POCKET PENCIL SHARPENER.**
4. **FLASHLIGHT:** To follow lines and write notes when you are out before dawn or after dusk.
5. **COMPASS:** Equipped with a pair of sights and circular dial, floating in liquid to stabilize its movement. Later, for censusing, a small floating dial wrist compass may prove more convenient.
6. **STEEL TAPE OR CLOTHES LINE:** Marked off into units of 26', 52' and 104'. Before marking a new rope, wet it, dry it and pull on it, since a new rope changes length when first wet and dried.
7. **PAINT AND BRUSH:** For marking location of lines. (Don't neglect to get permission of owner if you plan to mark stones or trees with paint).
8. **CORNER MARKERS:** Wooden stakes or steel fence posts painted in bright colors.
9. **TEMPORARY MARKERS:** Strips of cloth to tie to branches or 3 x 5 cards to tack to trees.
10. **INSECT REPELLENT:** (You can't do good work if mosquitoes are eating you up).
11. **CLOTHING:** Knee-length rubber "hunting boots;" trousers and jacket of heavy repellent

"ducks back" canvas to protect you from heavy dews, wet shrubbery and blackberry or other thorny tangles.

If you wear anything on your head, make it a cap rather than hat with brim, as the latter may seriously impair your ability to determine direction of bird song. (Cupping your hands behind your ears so as to extend sound receiving surface, almost doubles volume of sound received).



ESTABLISH a series of short-hand notations for quickly setting down on your map the data you obtain in the field. They should be as concise as possible in order not to clutter up the map too much. Their purpose is to indicate what a bird was doing when observed or heard. These are very helpful later when summarizing your summer's field work and preparing your final map of the breeding population. If you have a little spare time in the field before the breeding season starts, measure out a series of distances and memorize them as an aid later in judging distance. You can also practice on any bird you hear singing or calling by judging its distance from you and then, by pacing to where it was singing, see how accurate your guess was. Each of your field trips should be given a number for use with the symbols (as shown on page 291) and a record kept of its date. My experience indicates that it takes at least a dozen trips to get a good census.



map to another wastes precious field time. Instead they use a single sheet for each field trip and place a code letter to designate the species (instead of a trip number) inside each of the activity symbols which is put on the map where the bird was found. Then, later on (preferably the same day or evening) they transfer the data to their set of species maps.

## TABULATING THE POPULATION

When your field work period comes to a close, you can start the interesting job of tabulating the population of your area. Your records of the location of the singing males should fall in bunches. These bunches, and the actual nest finds and records of birds heard singing simultaneously, should enable you to sketch in the heart of the territory of each pair. The determining of the territory's maximum extent is not easy, unless you have observed numerous fights over territory between adjacent pairs and have mapped the exact place where they occurred, or have spent a good deal of time following individual birds around.

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### These Books and Articles Will Help the Census-Taker

- "A Guide to Bird Watching," by Joseph J. Hickey. Oxford University Press, New York, N. Y. 1943.
- "The Composition and Dynamics of a Beech-Maple Climax Community," by Arthur E. Williams. Ecological Monographs, July 1936.
- "Nesting Birds and the Vegetation Substrata," by William J. Beecher. Chicago Ornithological Society, Chicago, Ill. 1942.
- "Measurement of Bird Populations," by S. Charles Kendeigh. Ecological Monographs. January 1944.
- "Audubon Magazine—Breeding Bird Census Supplements." 1939 to 1946.
- "Bird Population Studies in the Coniferous Forest Biome During a Spruce Budworm Outbreak," by Charles Kendeigh. Biological Bulletin No. 1, Dept. of Lands and Forests, Ontario, Canada. 1947.
- "Breeding Birds of the Forest Edge in Illinois," by Verna R. Johnston. The Condor, March-April 1947.

You should now be ready to prepare your final map and summary for publication in the *Audubon Field Notes*. For details, consult the directions issued by the magazine and look at samples in the *Breeding Bird Censuses* of previous years.

## FALL NEST CHECK

When autumn comes and the leaves fall, take your species maps into the field and see how many of the unfound nests you can locate. Many become surprisingly conspicuous at this season. This is also good practice for next year, as nests are easier to find once you have seen just what sort of sites each species picks.

## VEGETATION MAP

If you have any botanically-inclined friends, get them to help you make a vegetation map of your census area. Number each different vegetative association and indicate its extent by a distinctive color. Then write up each as fully as you can. What are the dominant trees, their size, and the dominant grasses or shrubs?\* If your area is a forest, describe first the trees that comprise the upper canopy, then the mid-level trees, then the shrubs and finally, the common herbaceous plants of the forest floor. To indicate a tree's age, record its average diameter. To give a clue to the probable succession, note the seedlings and one-inch saplings. To indicate density of cover, state how many trees in each size class are present in an area of specified size in a normal part of the stand. The general character of an area may change markedly in just a few years as a result of the natural succession of plant communities, so make your vegetation map during the first year of your census. The record will be of great value to you, or to someone else later on, in determining just how great the change in the vegetation has been and in correlating it with the observed changes in the bird life of the area.

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\* Plant nomenclature is so chaotic that it is best to use Latin names and give your authority.

## YOUR CENSUS WILL CONTRIBUTE TO ORNITHOLOGICAL KNOWLEDGE

We should know the continental population of all species of birds, and their environmental needs, if we want to be sure of their future. These bird censuses, together with vegetation and land-use maps will ultimately provide us with an approximate figure for the bird population of each of the many different types of areas into which North America is now sub-divided.

When the same species of bird has been included in censuses from many regions, it becomes possible to evaluate more closely its requirements and determine the habitat and climate that represents the optimum of desirability, and is therefore able to support the densest population.

Censuses indicate to what extent year-to-year fluctuations are to be expected as a normal variation above and below the average population maintained by those factors that produce the so-called balance of nature. Armed with such information, we will know when to be concerned about a decline in numbers, and when the decline is one which we have learned to expect as a result of normal cyclic fluctuation. In this way, we will avoid getting concerned over variations about which we can do little or nothing and that are of little consequence, and those which indicate that something is seriously wrong and causing a decline far greater than that which would be caused by the normal cyclic swings.

Taken in virgin undisturbed communities, censuses give us yardsticks with which to measure the seriousness of the disturbances produced by human activities.

Through constant analysis of censuses from all sorts of areas, it becomes possible to locate areas that are carrying unusually high populations. Often a detailed study of such areas produces data of great subsequent value to those who seek to manage other areas in the interest of high bird populations.

As we learn more about the size of the territories of different species of insect-eat-

ing birds, we are better able to plan hedgerows and other cover so that the interspersing of fields with nesting cover can be arranged in such a way as to induce the maximum bird population density in order that predation pressure against crop-destroying insects may be at a maximum. Or the size and frequency of the openings that are necessary if a woodland is to have the maximum possible bird population.

In the case of hole-nesting species, we will gradually learn how many artificial nest boxes must be used in a given area to produce the maximum possible population of the species that require this type of nest site. The objective is to produce a saturated population yet not waste effort putting up boxes that, because of territorial jealousy, will not be used.

Censuses also provide data for putting such general terms as "abundant," "fairly common," "uncommon," etc., on a positive numerical basis. They indicate that one can speak of red-shouldered hawks as abundant, if a pair is present to each square mile of suitable habitat; or that ovenbirds cannot be called abundant unless about 300 pairs are present in a square mile of suitable habitat. That is, the census-taker will not use the term abundant until there are as many individuals present as the territorial requirements of the species permit.

When you take a census, you not only have the satisfaction of knowing that you are doing something worth while; you also discover the satisfaction of getting to know intimately your birds and their environment. Your area, and its birds, becomes part of you. The land becomes more intimately yours, than it you owned it, and you will find yourself looking forward with great anticipation to the return of old friends and speculating on what new birds may turn up as breeders. If you wish to do it and can get a permit, you might try banding some of each year's crop of young. The numbered aluminum bands and conspicuous colored celluloid bands will even more definitely identify your old friends of earlier years.

# THE PRESIDENT'S *Report to You*

*Pintails by Cruickshank*

THE waterfowl hunting regulations for the 1947-48 season have been announced, and it behooves all interested persons to observe in practice, and encourage enforcement of, the rules which the federal government has chosen to adopt. We regret that the government has not seen fit to demonstrate the results to be obtained by a one-year halt in the kill. We feel that it has missed an unexampled opportunity to place the regulations on a biological rather than a political or economic basis; in other words, on the only basis on which perpetuation of the waterfowl can be assured. We know that there is widespread support, among hunters and others, for a closed season this year. In our opinion, reports which the government received from its own investigators in that prime waterfowl breeding area, the prairie provinces of Canada, gave more than ample grounds for a decision involving a year's halt in the kill.

The announced regulations provide for a 35-day open season in the two western flyways, in the Pacific and central states, and a 30-day season in the two eastern flyways, in the Mississippi Valley and Atlantic states. However, opportunity was offered all states to choose, if they preferred, two split seasons, of 14 days each in the two western flyways and of 12 days each in the two eastern flyways. Specific dates were set by the federal government for opening dates of both consecutive and split seasons, but the states were given choice from among a



series of such opening dates. This has resulted in such inconsistent choices as to provide open seasons in some states earlier than in neighboring states lying to the northward.

The offering of the split season alternative clearly represents an effort to get away from the irritating problems involved in trying to please the various states as to zoning. It is probably generally true that less waterfowl will be shot in a given state in two split seasons of either 12 or 14 days each than would be shot therein in a 30 or 35-day consecutive season if the state were zoned within its borders. The principle, however, of allowing the states choice as to consecutive or split seasons and as to open-dates sets an unfortunate precedent. It seems to us important that the federal government retain full responsibility, as given to it by the provisions of the Migratory

Bird Treaty and Act, and that any delegation of choice to the respective states opens the door to future consideration of yielding other federal responsibility.

The bag limit on ducks is reduced from 7 to 4, but the possession limit remains double the bag limit, and has, therefore, been reduced from 14 to 8. For all practical purposes, then, except at those few points where bag limits can be easily checked, the bag respected by many hunters this year will be 8.

The bag limit on geese is somewhat complicated, the limit being 5 in the 3 Pacific coast states, although this may include not exceeding 2 Canada geese, white-fronted geese or black brant. In all other states, the bag limit is to be 4; in Alaska, Porto Rico, Idaho, Utah, Arizona and Nevada this may include only 2 Canada or white-fronted geese or one of each; in all other states, but one Canada or white-fronted goose. The season for brant on the Atlantic coast has been closed.

The shooting hours are to be restricted to from sunrise to one hour before sunset, whereas a year ago they were from one-half hour before sunrise to one-half hour before sunset. A constructive move has been made in deciding that no shooting will be permitted on the opening days of any consecutive or split seasons until 12 noon.

The states enjoying closed seasons on wood duck have been extended, at the request of respective State Fish and Game departments, to include New Jersey and West Virginia. The daily bag limit on scoters will be 7, with possession limit of 14 (the same as last year); that on American and red-breasted mergansers 25 singly or in the aggregate, without possession limit (also the same as last year).

#### **VIOLATORS OR SPORTSMEN?**

Newspaper clippings from many parts of the country demonstrate that there have been two principal kinds of response from the hunting fraternity to the announcement of these regulations.

The first, which is widespread, is that the bag is to be so small and the season so

short that many hunters do not think it will be worthwhile to bother with waterfowl hunting this year; that a great many of those who do so bother will, because of the "severity" of the restrictions, not hesitate to violate the regulations; that, therefore, those holding this view feel that it would have been far preferable had the federal government decided to close the season entirely this year.

The second reaction evidences an absence of sportsmanship and a rather dismal disregard for the preservation of an adequate breeding stock of waterfowl or of the sport of wildfowling. It is based on a "Let me get mine now" attitude, and is evidenced by writings in Rod and Gun columns of various papers urging the several states to disregard the federal regulations and to deny to the federal government the cooperation of the state enforcement staffs. Unquestionably those holding this view represent a minority, but the unashamed expression of that viewpoint indicates the existence of one of the basic problems in restoring the waterfowl supply which those of that viewpoint have had such a large hand in depleting.

May we encourage our members and friends to take notice this fall of the abundance or scarcity of waterfowl, the apparent volume of kill and the degrees of observance and enforcement of regulations in the area in which they live? We will appreciate receiving information on these points during or at the end of the season.

#### **KICK-BACKS FROM CHEMICALS**

Use of the 2-4-D hormone, known as a "weed killer," is causing a furor in many states. In Texas it was sprayed on corn lands with the idea that it would protect that crop and cause a bigger yield per acre. According to local testimony it drifted as much as 12 miles, causing cotton "to grow itself to death" and beans to grow to a length of 3 feet and die suddenly without seeds; also to cause cotton bolls to grow long instead of round and break open underneath. Report has it that the cotton crop was totally destroyed on some 4000

acres in Wharton and Matagorda counties and damaged on another 15,000 acres.

In Louisiana, the Conservation Department sprayed a lake for the purpose of eradicating water hyacinths clogging it. Apparently it was thought that a strip of woodland would prevent any of the chemicals reaching crop fields on the other side, but it has been reported as affecting everything except corn and the true grasses for a distance of quite a few miles; cotton, potato and pea crops, it is said, have been seriously damaged, and some residents of the community claim that they became ill from milk and raw vegetables which had come in contact with the weed killer.

Here is still further evidence of the unfortunate repercussions of so many of man's attempts to control what, in most cases, is so much better controlled by Nature.

#### MUSTARD GAS IN THE GULF

Enormous numbers of dead fish have been observed floating in the Gulf of Mexico and washed up on the west coast of Florida. People of those towns and counties are alarmed about the "red tide," which, according to our good friend, Dr. Herbert R. Mills of Tampa, would appear to be due to the dumping of Lewisite Mustard Gas by or for the Army some 40 miles off shore in the Gulf of Mexico. Dr. Mills' own

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## THE RED TIDE

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SOME idea of the magnitude of the Gulf fish hecatomb may be gained by the realization that ONE SINGLE ACCUMULATION of dead fish now floating in the Gulf off Clearwater is estimated as covering over 300 square miles, so closely packed, according to one observer, that one could "walk across them like logs!" This is merely one of the many accumulations of dead fish which have been showing in the Gulf since February. In addition, THOUSANDS OF TONS have washed ashore. According to the August 5, 1947, issue of *Tampa Tribune*, 191 tons of dead fish were buried at Reddington and Indian Rocks Beaches alone. There is no accounting for the millions of fish which sank to the bottom and did not rise.

One sickening aspect of this appalling spectacle is the attitude of the public. Their chief concern is whether any of the dead fish will wash ashore and cause an odor. For example, in the *Tampa Tribune* of August 12, 1947, Oscar Loeffler, head of the Clearwater Chamber of Commerce Advertising Committee, is quoted as saying "THE WORST PART OF THIS RED TIDE SITUATION IS THE EFFECT IT MAY HAVE ON PROSPECTIVE WINTER VISITORS." (The capitalization is mine.) The local health authorities are making a great show of the occasion and are frantically burying the dead fish, even using bulldozers in some areas where the accumulations are too large to handle by hand. In other areas these sanitarians are having the refuse hauled away by the truck load and BURNED. In their fervor to "protect the public health," they are even spraying miles of beach with DDT to prevent a fly plague, and now it is proposed to burn the fish at sea by dropping

gasoline or oil bombs on the drifting carcasses before they wash ashore.

There is no health question involved in the ordinary decomposition of fish, or, in a situation of this kind, from the flies which are only hastening the decomposition which, if left alone, would last only a few days at the most. Tolerance of the harmless odor of rotting fish and of the flies would seem an insignificant sacrifice on the part of the local residents, recreationists, and business people, in the face of this great calamity, which is only magnified by the use of fire and DDT. The least that can be done now is to let these pitiful remains of our once vast Gulf fisheries quietly decay and return to the sea.

It has been reported from various sources that pelicans, cormorants, and gulls are dying by the thousands on the beaches, and Rube Allen wrote in the *St. Petersburg Times* of August 2 that the area about Tarpon Key (Bush Key) is "strewn with dead birds." On August 5 Harry Mingo and I went to Bush Key in the "Clapper Rail." We cruised completely around the island from about 20 feet off shore and landed at two points, covering typical samples of the island afoot, penetrating into the large mud flats in the center, but found NOT ONE dead bird. The rookery appeared to be in normal condition for this season of the year. I do not deny that birds have been killed in large numbers during this catastrophe, but the informant was mistaken about Bush Key. We did count 147 dead fish (99% pig fish) floating in the water on the east side of the Key. Bill Allen went out to Passage Key on August 2 and reported no dead birds there, although the beach on the bay side was



description and discussion of this catastrophe is so striking that it appears below.

#### OWNERSHIP OF COASTAL OIL

A very important decision was handed down in June by the Supreme Court of the United States, holding that "California is not the owner of the 3-mile marginal belt along its coast and the federal government, rather than the state, has paramount rights in and power over that belt, an incident to which is full dominion over the resources of the soil under that water area, including oil." Many informed persons hold that such a Supreme Court ruling must arbitrarily apply to all coastal states,

even though the issue was presented to the Court by the state of California alone.

This decision may well have very important bearing upon the protection and preservation of the congregations of nesting water birds in the sanctuaries and refuges of your Society and of federal and state governments on islands in coastal waters, especially those in Texas and Louisiana. It should be recognized, however, that it is within the power of the federal Congress to pass new legislation, should it so desire, which would return to the states the title to these under-water lands within the 3-mile limit. There is also an important question perhaps involved in whether or

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By Herbert R. Mills

"covered with dead fish."

So far there have been three major theories advanced as to the cause of this unprecedented disaster. One is the great volume of fresh water pouring into the Gulf on account of unusually heavy rain fall this season. This theory can be discounted since the fish deaths are not statewide but are limited to the southwest coast of Florida. Also, according to the rainfall theory, the bays should have suffered most. On the contrary the bays and inland waters are not primarily affected, only the waters of the Gulf. In some instances the bays have been secondarily affected by water backing in from the Gulf. Pollution from DDT and other poisons applied to the land and draining from the shores can also be eliminated for the same reason.

The second theory is that of an overwhelming abundance of dinoflagellates of the genus *Gymnodinium*. This theory certainly merits careful consideration, for these dinoflagellates are undoubtedly related in some way to the fish plague, but many of the fish appear to be killed too suddenly to be explained on a basis of parasitism, and fish-eating birds would hardly be killed by eating parasitized fish.

The subscribers to this theory argue that this phenomenon has occurred before; but it is hard to believe that such is the case. It is almost inconceivable that a catastrophe of this magnitude COULD EVER HAVE HAPPENED BEFORE. Dinoflagellates are a normal component of the plankton and their increase may merely be the result of the elimination of their fish predators and of their resistance to the poison whatever it may be. As an illustration, although DDT is especially toxic to

aquatic animal life, when it is applied to ponds in high dilutions some forms of life (the *olegochaeta* and *nematoda*) actually increase due to their resistance to the poison and also to the killing of their predators which are sensitive to DDT.

The third theory is that of poison gas dumped by the Army into the comparatively shallow waters of the Gulf about 40 miles off shore from the southwest coast of Florida. This is the theory which I think is entitled to the most credence. There is abundant evidence that the Army did dump unused war gas during the summer of 1945, and that they dumped it close off shore and, it is rumored, in spite of urgent advice to the contrary. Other evidence supporting the poison gas theory is that the emanations from the dead fish and polluted water or so-called "red tide" are said to be irritating to the eye, to the respiratory passages, and to the skin. The greenish color and slight viscosity of the water are consistent with gas pollution. However, these emanations appear to be in such high dilution as to be negligible from the standpoint of public health.

I have consulted with Dr. Robert F. James, a chemist of Clearwater, and I understand that he has initiated an investigation from which I anticipate positive results.

One thing which this misfortune has revealed is that the fisheries of the southwest coast of Florida were of truly mammoth proportions, and we can surmise that these great resources were a part and parcel of the waterbird concentrations of this area. There is one small ray of light that brightens the gloom of this awful tragedy, and that is that the inland bays seem so far to have been spared,

not the Supreme Court's decision has any retroactive effect on mineral leases executed prior to the date of the decision.

#### STATUS OF FEDERAL LEGISLATION

President Truman vetoed the National Science Foundation bill because of the feature providing for the control of the administrative staff by a group of scientists acting as trustees or directors and appointed by the President. He stated that, in his opinion, such a provision is unsound and that control of the administration of such a foundation should be in the hands of the President. Unless, then, the leaders of Congress feel, at the opening of the next session in January, 1948, that an essentially identical bill could be passed over the President's veto, action is likely to be deferred until after the 1948 presidential election. Such delay is regrettable.

#### THE DUCK STAMP BILL

The bill to provide for an increase in the price of the duck stamp, at the same time providing for the opening of federal wildlife refuges to hunting at the discretion of the Secretary of the Interior remains in committee, although it was reported favorably by the Subcommittee on Wildlife of Marine and Fisheries to the whole committee. Your president appeared at a hearing and expressed the Society's approval of the provision for increasing the price and that for authorization of use of a larger proportion of the available monies for enforcement; at the same time, to register the Society's opposition to provision to opening the refuges to hunting as inconsistent with the primary purposes for which the refuges are established.

#### PARKER RIVER COMPROMISE

Your Society supported a compromise bill H.R. 3578, affecting the Parker River National Wildlife Refuge in Essex County, Mass. Such compromise was also supported by the National Wildlife Federation, the

Massachusetts Wildlife Federation, and the Massachusetts Audubon Society, among others. H.R. 3487, which provides for complete abolition of this refuge, was not reported out by the subcommittee to which it was referred, nor was the compromise H.R. 3578. That subcommittee and the full committee saw fit to report out still another bill, H.R. 4108, which would reduce the refuge area essentially to Plum Island.

When this bill came up for consideration on the floor, a motion to suspend the rules and pass the bill was defeated, but it remains on the House calendar and its passage at the next session of Congress should be opposed and the enactment of H.R. 3578 encouraged instead.

#### JACKSON HOLE "PASSED OVER"

H.R. 1330, affecting the Jackson Hole National Monument, and introduced by the Chairman of the House Subcommittee on Public Lands, Mr. Barrett, of Wyoming, was reported favorably by the full committee and was likewise objected to and "passed over," but remains on the House calendar for consideration at the next session. This bill, in our opinion, should not pass. We believe that the integrity of that monument should be maintained as established, and that Mr. Barrett's bill is but one of a number of moves involved in the current attempt to reduce federal control and ownership of western lands.

#### EVERGLADES PROGRESS

H.R. 3378, designed to implement action with regard to establishment of the Everglades National Park in Florida, was held in the House Subcommittee on Public Lands; this in spite of the fact that the entire Florida delegation in Congress, the entire Florida State Cabinet but one member thereof, the Directors of the Everglades National Park Commission, and the Department of the Interior, through both the National Park Service and the Fish and Wildlife Service, favored its passage. Your president testified at the hearing at the

request of the Florida delegation and Commission.

The opposition appeared to come primarily from the Chairman of the Subcommittee, Mr. Barrett of Wyoming, although the State Attorney General, Mr. Watson, who apparently disagrees chronically with the other members of the State Cabinet, spoke at some length in opposition to the bill. Naturally enough, a number of private land owners within the proposed park area were present to indicate their opposition to parting with their mineral rights. Here is an illustration of how political considerations interfere with congressional action on a sound basis.

Without invidious distinction as regards many other effective witnesses at the hearing, tribute should be paid to the fine quality of testimony presented by the two Florida Senators, Holland and Pepper. This bill, as well as its companion bill, S. 1554, remains in committee for consideration at the next session of Congress.

It is your president's opinion, shared in by many others concerned, that this bill is not necessary and that the Department of the Interior already has, under previously enacted laws, adequate authority to proceed to use the \$2,000,000 gift of the State of Florida in acquiring, by condemnation if necessary, any of the private lands within the proposed park area.

#### SAN GORGONIO WILDERNESS SAVED

You will be happy to learn that the U. S. Forest Service decided that it would not open to commercial development, as it had at first proposed, a portion of the wilderness area in the San Gorgonio National Forest. Credit is due the many conservation organizations that protested against any such plan, and it was particularly interesting to observe that many ardent skiers took pains to make their opposition known. They do not want convenient board and lodging provided, rest rooms or ski tows. They want to enjoy the unspoiled wilderness. It is rather those with commercial interest in catering to the inexperienced skier who sought to invade this wilderness area.

Congratulations are due the Forest Service, particularly its Chief, Mr. Lyle F. Watts.

#### MORRISON APPOINTED REPRESENTATIVE

Minnesota is a state still possessing great natural resources; one in which there is widespread interest in conservation and in recreational use of the outdoors, including hunting and fishing. It is an important state from the standpoint of strong representation on the part of your Society.

Kenneth D. Morrison has been deeply interested in wildlife and its conservation ever since he was a small boy. In recent years he has been on the staff of the Minnesota Department of Conservation, with the title of Editor of its monthly publication, *The Conservation Volunteer*. He has also been responsible for much of the newspaper, radio and other publicity of that Department. As of May 1st last, Morrison joined the staff of the National Audubon Society, as its Minnesota Representative, to promote all the Society's varied activities in that state. Early in July he inaugurated a two-month program of Audubon Wildlife Tours in Itasca State Park, through the cooperation of the State Park Division. We are confident that Morrison will turn in an outstanding performance in furthering the Audubon cause and activating its program in Minnesota.

#### CAMP AND CENTER

The Audubon Nature Camp in Maine has been operating at full capacity in all five of the summer sessions—in fact it has run in excess of standard capacity. The number of different individuals, mostly teachers and other youth leaders, who have now attended that Camp in its nine summers of operation exceeds 2000 and they hail from 41 states and 5 provinces of Canada. The fine spirit of the graduates of that Camp is something to conjure with. They have had a happy, informative time while there and retain a great affection for the Camp as an organization to which they rightly feel they belong.

This year an appeal was made to the Camp graduates for contributions to fi-

nance the approximate \$3000 cost of a new boat, and up to date over \$2100 has been contributed. Just before the war, graduates of the Camp, in response to special appeal, financed the cost of a new building with fireplace, to provide an adequate meeting room and library facilities. The directors and staff of the Society, let alone that of the Camp, are deeply appreciative of the generosity of Audubon Campers.

The Audubon Nature Center in Greenwich, Conn., has had a good summer under the new leadership of Mr. Charles A. Mohr. The new kitchen and dining room building, financed largely by contributions of directors and friends of the Society, has been available for use and has added greatly to the convenience of operation and comfort of the students. We are anxious to develop the Greenwich student capacity to a figure comparable to that in Maine. It remains to finance and construct adequate housing facilities for 50, rather than 20,

students at a time. We shall hope to have attained that goal by June of 1949.

One of the most constructive developments which the Society could engineer would be the establishment of comparable Audubon Nature Camps and Centers in many other states, particularly at ten or a dozen geographically separated locations, such that teachers and other youth leaders could reach some one of them without too great travel expense. The demand for the training exists. The problem is to obtain gifts of land and suitable buildings at suitable locations, or rent them at nominal cost, or deal on favorable terms for board and lodging with the managers of such properties. In our experience, the enrollment fees that teachers and other youth leaders can afford to pay will cover operating expenses of such institutions, but cannot be expected to cover the cost of acquisition or alterations of property or return on investment in it.

Pintails, photographed by Allan D. Cruickshank.



#### AUDUBON WILDLIFE TOURS

Plans are developing for the tours of the 1947-48 season, and members will receive prospectuses by mail. Alexander Sprunt, Jr., is scheduled to again lead tours at Bull's Island, S. C., from about November 10th to January 9th, and on the Kissimmee Prairie and the shores of Lake Okeechobee from about January 19th to March 20th. Charles M. Brookfield is scheduled to again lead tours from Miami as a base, beginning about the first of November and running into the late spring or mid-summer; these will again take tourists to see the Everglades and cypress strands in the region of the Tamiami Trail; the birds at the East River rookery and in Florida Bay, as well as those on keys off the southwest coast. Undoubtedly, tours will again be conducted in Minnesota by Kenneth Morrison.

We plan to initiate tours definitely in the late spring and early summer to the Vingt'un Islands sanctuary in Galveston Bay, Texas, from Houston as a base. We would like to resume conduct of such tours in southern California before the year is out. An ever-increasing number of people, most of whom are beginners in the observation of animals and plants, and many of whom are not members of the Society, participate in these tours, which have the added advantage of favorably impressing the year-round residents of the communities in which the tours are conducted.

#### CONVENTION

Don't forget the dates of our annual convention are October 18-21 inclusive, winding up with the annual dinner on the evening of Tuesday, the 21st. Program will be mailed to all members in ample time to make plans.

#### NOMINATIONS

The official committee to nominate a slate of directors for consideration at the annual meeting of members on October 21st has reported that it unanimously nominates for three-year terms, expiring in

1950, Mr. F. Cecil Baker, Dr. J. R. Dymond, Mr. Ludlow Griscom, Dr. E. Laurence Palmer and Mr. Charles G. Woodbury.

Mr. Griscom and Dr. Palmer have, of course, previously served on the board. Mr. Baker was appointed by the board to fill a vacancy as of last February. He has been interested in birds ever since he was a small boy and, now that he has retired from an active business life, is taking an ever-increasing interest in conservation, as well as in bird study. His residences are in Florida and Vermont.

Dr. Dymond gave invaluable advice as a member of the board of directors in the 1938-1944 period. Now that difficulties of travel incident to the war are over, it seems important to the committee that Canadian representation be renewed on the Society's board of directors. Dr. Dymond is the director of the Royal Ontario Museum of Zoology at Toronto.

Mr. Woodbury lives in Washington, D. C., where, for years, he represented the canning industry, and is now a valued member of the Executive Committees of The Wilderness Society and the National Parks Association. In earlier years he was active in the county agent field in the promotion of better agriculture.

To our regret, the Society loses this fall, under the provisions of the by-laws, the services of Mr. Gayer G. Dominick and Dr. William E. Wrather. The former has lent freely of his wisdom; has twice served as Chairman of the Executive Committee and has devoted particular attention to the financial affairs of the Society and the welfare of the staff. Dr. Wrather has not been able, much to his distress, to attend more than a few meetings because of the exigencies of the problems in which he found himself involved, in the location and procurement of strategic metals all over the world during the war and the conduct of the important office of Chief of the Geological Survey since then. We shall miss the counsel and participation in board meetings of these two staunch friends of the Audubon Society.



# The NATURE of THINGS

Comments on the new  
Nature Literature —

By Richard H. Pough

## THE FLAME BIRD

By Robert P. Allen, Dodd, Mead & Co., New York, N. Y., 1947. 6 x 8½ inches, 233 pages, illustrated with photographs. \$3.50.

Here at last in a chatty, informal style Bob Allen tells the fascinating story of his work in Florida Bay and the Texas coast with the roseate spoonbill. It includes the high lights and more popular aspects of his scientific findings about this beautiful bird, but the great charm of the book lies in the fact that here the author has been able to put down all the little incidental experiences that befall an Audubon researcher in the field. It tells of his camp on lonely Bottlepoint Key and his neighbors there—the crocodiles and the crabs, his cruise in the *Croc* through the 10,000 Island wilderness and his experiences with the friendly but somewhat puzzled native fishermen. All in all, it is absorbing reading for anyone who likes the out-of-doors.

## FOOTNOTES ON NATURE

By John Kieran, Doubleday & Co., Garden City, N. Y., 1947. 5¾ x 8½ inches, 279 pages, illustrated by Nora S. Unwin with wood engravings. \$3.00.

It is a rare privilege to be able to share the pleasure of such informal outdoor rambles as John Kieran and his companions have taken for years around New York City. You will be the wiser not only in a knowledge of plants and animals but in what a wonderful variety of beautiful and surprisingly wild country lies just outside the city, available to all who have the eyes to appreciate its charms.

## SPRING IN WASHINGTON

By Louis J. Halle, Jr., William Sloane Associates, New York, N. Y., 1947. 6 x 8½ inches, 227 pages, illustrated by F. L. Jaques. \$3.75.

This is a very diverting and charmingly written account of the natural phenomena that accompany the coming of spring in the city of Washington, and Mr. Halle's personal reactions to them. Birds come in for the greatest attention as the author is an expert amateur ornithologist, but this does not prevent his wandering off frequently into philoso-

phical sidetracks in which he reveals a community of spirit with such men as Thoreau and Burroughs. Any visitor to or resident of Washington will also find it an excellent guide to the spots of greatest natural history interest about the city.

## LOGBOOK FOR GRACE

By Robert Cushman Murphy, The Macmillan Company, New York, N. Y., 1947. 6¼ x 9½ inches, 290 pages, with maps and sketches. \$4.00.

This is the story of a year's voyage under sail by a young naturalist on an old time New Bedford whaling vessel in the years 1912-13. It is in the form of a day-by-day journal which the author kept for his bride of a few months who was left behind. Although full of interesting notes on the marine life seen during the voyage, which makes the book of unusual interest to any all-round naturalist, many will enjoy it most for the accurate and detailed picture it gives of a way of life that is no more. The terminus of the trip was South Georgia, a wild outpost of the Antarctic, where they spent 3½ months whaling and sealing in waters that teemed with such interesting forms of wildlife as whales, sea elephants, penguins, petrels and albatrosses.

## BIRDS IN THE GARDEN, AND HOW TO ATTRACT THEM

By Margaret McKenny, University of Minnesota Press, Minneapolis, Minn., 1946. 7¼ x 9¾ inches, 349 pages, illustrated with photographs and color plates. \$5.00.

Originally published in 1939 this book filled a unique niche in nature literature and it is fine to have it back in print again. The 16 color plates from the "Birds of Minnesota" and 86 photographs make it a handsome volume.

## THE RUFFED GROUSE—ITS LIFE STORY, ECOLOGY AND MANAGEMENT

By Frank C. Edminster, The Macmillan Company, New York, N. Y., 1947. 6½ x 9½ inches, 385 pages, illustrated. \$5.00.

This book has been badly needed for a long time, as it does for the grouse what Stoddard did for the bob-white some years ago. It makes quite clear the reason why the bird is on the decline in so much of the Northeast, but better still it shows that there is a lot that any landowner can do to bring it back to greater abundance. The excellent picture section tells almost better than words the story of what is and what is not a good habitat for grouse. There is still too little general recognition of the fact that a woodland without frequent shrubby openings is not grouse habitat and that the presence of dense conifers for roosting and shelter is an essential winter requirement.

## LIFE HISTORIES OF NORTH AMERICAN JAYS, CROWS AND TITMICE

By A. C. Bent, *Smithsonian Institution, Washington, D. C.*, 1946. 6 x 9½ inches, 495 pages, paper covers, illustrated with photographs. \$1.75.

This is the 15th in this excellent series which Mr. Bent started in 1919. It follows the same plan as earlier volumes, each subspecies being treated separately under a series of headings—nesting, eggs, plumage, food, behavior, voice, winter, field marks, enemies and range. It goes without saying that every serious bird student will want to add it to his library.

## ENCHANTED STREETS

By Leonard Dubkin, *Little, Brown & Co., Boston, Mass.*, 1947. 5¼ x 8¼ inches, 210 pages. \$2.75.

This is a rambling, humorous account of some of the adventures of a city dweller whose consuming interest is in living things. It is an amazing revelation of the extent to which even the biggest city (in this case, Chicago) is populated by what can best be described as wildlife. Mr. Dubkin writes amusingly of the conflict between his real interests and the requirements of a job, which results in his spending most of his time without one.

## THE LOGHOUSE NEST

By Louise de Kiriline, S. J. Reginald Saunders & Co., Ltd., *Toronto 1, Ontario*, 1945. 5½ x 8½ inches, 173 pages, illustrated with drawings by Thoreau MacDonald. \$2.50.

In this book the author tells about the lives of her bird neighbors through the eyes of Peet, a chickadee who is its central character. The story carries him through a period of a year during which he has many adventures that draw numerous other birds into the story. Although the birds speak and much of their motivation is interpreted in human terms, the author reveals herself as a keen and careful observer.

## LIFE HISTORIES OF NORTH AMERICAN DIVING BIRDS

By A. C. Bent, *Dodd, Mead & Co., New York, N. Y.*, 1946. 6½ x 9½ inches, 237 pages, illustrated with photos. \$5.00.

For many years this first volume of the famous Bent series has been out of print and selling for 40 and 50 dollars a copy. Dodd, Mead & Co., who have published so many fine nature books in recent years, have now undertaken to make available again the earlier Bent volumes. As the whole series is an essential part of any well-balanced bird library those who have been discouraged from acquiring it by the lack of availability of the earlier volumes should not miss this chance to start. This

is a straight reprint, illustrated by the same photographs but the color plates of eggs, a feature that was not continued in other numbers of the series, have been omitted.

## A BIBLIOGRAPHY OF BIRDS, PART 3. SUBJECT INDEX

By R. M. Strong, *Field Museum of Natural History, Chicago, Ill.*, 1946. 6¼ x 9½ inches, 528 pages, paper covers. \$4.50.

This is the key that unlocks and makes infinitely more useful the material in the first two parts of Dr. Strong's monumental work: these, the author catalog, list by author and date, articles in about 2000 periodicals plus books, up to the year 1926 (the year Biological Abstracts commenced publication). The titles selected were primarily those dealing with anatomy, physiology, ecology, and behavior, with some less complete inclusion of other ornithological fields. This index consists of 119 general headings, most with numerous subheadings. An additional "Finding Index," still to come, will complete the work.

## THE BIRDS OF NORTH AND MIDDLE AMERICA, PART X

By Robert Ridgway and Herbert Friedman, *Smithsonian Institution, Washington, D. C.*, 1946. 6 x 9½ inches, 484 pages, paper covers. \$1.25.

This volume, the 10th part of the series started by Robert Ridgway and now being completed by Herbert Friedman, in part from Dr. Ridgway's original notes, covers five families—the curassows, guans and chachalacas; the grouse and ptarmigan; the American quail, partridges and pheasants; the guinea-fowl and the turkeys. The series which started in 1901 and has two more parts to come, is purely a descriptive catalog with a bibliography on each species or race described.

## THE LAND AND WILDLIFE

By Edward H. Graham, *Oxford University Press, New York, N. Y.*, 1947. 5¾ x 8½ inches, 232 pages, illustrated. \$4.50.

This book deals with the problem of how land can be made to yield the highest possible return in terms of wildlife values while still being put to the most intensive productive use of which it is permanently capable. The first two chapters deal with historical background relating to wildlife and its conservation. Then follow a series of chapters on the handling of various distinctive land types—marshes and swamps; ponds and waters; stream banks and ditches; field borders and roadsides; windbreaks and hedges; gullies, odd areas and spoil banks; cropland, pasture and wood lots; and forests and range. Dr. Graahm as Chief of the Biology

Division, of the U. S. Soil Conservation Service, is eminently qualified to discuss these matters as his agency has been one of the leaders in applying sound, practical, down-to-earth practices to the land on a scale unequaled by any other organization.

#### THE ILLUSTRATED ENCYCLOPEDIA OF AMERICAN BIRDS

By L. A. Hausman, Garden City Publishing Co., Garden City, L. I., N. Y., 1947. 5¾ x 8½ inches, 541 pages, with color plates and drawings. \$2.49.

This is another of the books back in print after the war. In contrast to the average bird book this one is arranged alphabetically by groups and then by species and sub-species. Most of the text is devoted to description and distribution and is copiously illustrated with small black and white line drawings plus 16 of the "Birds of New York" color plates.

#### BIRDS OF MALAYSIA

By Jean Delacour, The Macmillan Co., New York, N. Y., 1947. 5¾ x 8¼ inches, 382 pages, with black and white illustrations. \$5.00.

Similar in treatment to the Birds of the Philippines and Birds of the Southwest Pacific, this new

volume in the Pacific World series covers the birds of the Malay Peninsula, Sumatra, Java and Borneo and adjacent islands. The more outstanding species are well illustrated with line drawings and keys are provided for each family. The area covered is very rich ornithologically with 780 known species, 660 of them resident.

#### EXPLORING OUR NATIONAL PARKS AND MONUMENTS

By Devereux Butcher, Oxford University Press, New York, N. Y., 1947. 6¾ x 9½ inches, 160 pages, profusely illustrated. \$2.75. (\$1.75 with paper covers).

Here, complete with key map, is a compact guide to the twenty-six National Parks and the thirty-eight Monuments administered by the National Park Service, which we Americans have had the wisdom and foresight to establish so that we and generations to come can enjoy and appreciate the natural beauty of the wonderful continent that we are privileged to inhabit. I am sure that no one can read this book and look at its pictures without getting the wanderlust. Its terse descriptions give all the essential facts concerning the location and setting of each area and the things about its wildlife or geology that make it especially interesting.

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#### CHINCOTEAGUE—A NATIONAL WILDLIFE REFUGE. CONSERVATION IN ACTION, NO. 1

By Rachel L. Carson, U. S. Fish & Wildlife Service, Washington, D. C., 1947. 7½ x 10 inches, 18 pages, illustrated, paper covers. 15¢.

There has long been a need for a popular series of booklets on various phases of the work of the U. S. Fish & Wildlife Service, on a par in attractiveness and readability with the material being issued by business and other private organizations—a thing equally true of many other branches of our government as well. We no longer live in a world where things can be left to chance. If we are to have wildlife we must plan for it and set aside habitats for it. If we are not to be overrun with exotic plant and animal pests, we must take steps to keep them out. Yet how many of our citizens understand and properly value services such as these that our government is rendering them. Clearly too few or we would not see budgets for departments carrying on vitally important activities, such as these, cut to the bone.

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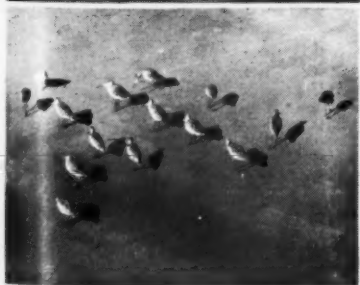
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## PLANTS

### THE ILLUSTRATED ENCYCLOPEDIA OF AMERICAN WILD FLOWERS

By E. H. Hausman, Garden City Publishing Co., Garden City, L. I., N. Y., 1947. 5¾ x 8½ inches, 534 pages, with color plates and drawings. \$2.49.

This is a botany book without keys. It is prefaced with a 60 page illustrated guide to 87 common plant families, the first step in using the book being the determination of family. The families are arranged in alphabetical order in the body of the book and the individual species are either alphabetical by name or group name, each group being illustrated with a line drawing. In all, some 1,200 species of plants are covered.

### HANDBOOK OF THE TREES OF THE NORTHERN STATES AND CANADA

By R. B. Hough, The Macmillan Co., New York, N. Y., 1947. 6½ x 9½ inches. 470 pages, illustrated. \$5.50.

Published originally in 1907 and out of print for many years, this book has yet to be equalled as a pictorial guide to our Northern trees. Each species receives 2 pages with photographs of trunk, winter twig, fruit and leaves, a range map and a short writeup.

### TROPICAL AND SUBTROPICAL FRUITS

By B. E. Dahlgren, Chicago Natural History Museum, Chicago, Ill., 1947. 5½ x 8½ inches, 72 pages, illustrated, paper covers. 50¢.

This booklet, the 26th, in an excellent series issued by the Department of Botany of the above institutions is a well-illustrated catalogue of some 65 common fruits of the new and old world tropics, very few of which are known to the average dweller in the temperate zone. It would be an invaluable companion to any naturalist who is traveling in the tropics for the first time.

### WEEDS AND WHAT THEY TELL; ANIMALS AND THE GARDENER; WILD GARDENS OF NEW ENGLAND; EDIBLE WATER PLANTS; OUR FRIEND, THE EARTHWORM.

Gardener's Book Club, Organic Gardening, Emans, Pennsylvania. 5¾ x 8 inches, paper covers. 50¢.

These are just a few of the many interesting subjects that are being covered in a series of inexpensive, paper bound books that are being published by the Gardener's Book Club. The topics covered are often of as much interest to naturalists as gardeners.

## MAMMALS

### THE PUMA—MYSTERIOUS AMERICAN CAT

By S. P. Young and E. A. Goldman, The American Wildlife Institute, Washington, D. C., 1946. 6¼ x 9 inches, 358 pages, illustrated. \$4.00.

This book, through quotations from many sources, tells the story of man's relations with this superb animal that ranges from northern British Columbia to southern Chile. It is mostly a story of the inevitable conflict with human interests and resultant persecution to which it has been subjected ever since the white man came to the Western Hemisphere. The latter part of the book is devoted to a detailed description of the 30 races into which the species is at present divided.

### MAMMALS OF NORTH AMERICA

By Victor H. Cahalane, The Macmillan Company, New York, N. Y., 1947. 6¼ x 9½ inches, 682 pages, illustrated by F. L. Jaques. \$7.50.

This is one of the outstanding new nature books of the year. It is divided into 94 separate units, each of which covers a single mammal or group of closely related ones, and is illustrated with one of

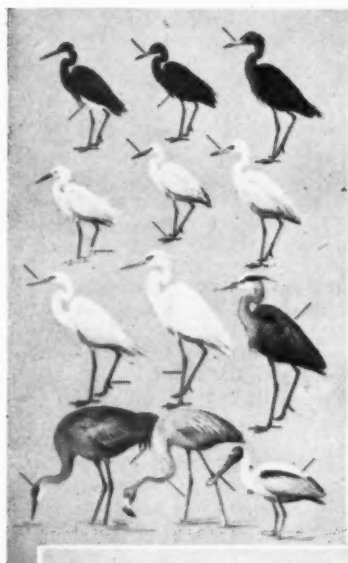
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#### ALASKA'S ANIMALS AND FISHES

By Frank Dufresne, A. S. Barnes & Co., New York, N. Y., 1946.  $7\frac{1}{2} \times 10\frac{1}{4}$  inches, 297 pages, illustrated by Bob Hines. \$5.00.

This is a very complete book on the mammals of Alaska to which is appended a section on some of the more outstanding game and commercially valuable fish. It is well illustrated with 14 color plates and many drawings. Each species and race is briefly described, its range given and a few of the more important details concerning its life history are noted. Only in a few cases, notably the wolf, does the author depart from a thoroughly objective treatment.

#### CLASSIFIED

To assist our readers in disposing of their surplus bird prints, back issues of BIRD-LORE and AUDUBON MAGAZINE, used cameras, binoculars, and other equipment, AUDUBON MAGAZINE will accept classified advertising from reputable individuals and business houses, at the rate of 6 cts. per word per insertion, cash with order. Minimum insertion \$2.00.

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*Audubon Magazine* for regulations  
or your July 1947 issue of  
*Audubon Field Notes*

## FOR YOUNG PEOPLE

#### EASY CRAFTS

By Ellsworth Jaeger, The Macmillan Co., New York, N. Y., 1947.  $5\frac{1}{2} \times 8\frac{1}{4}$  inches, 129 pages, illustrated. \$1.95.

Here are 64 handicraft projects for use with groups of young people. Each is described in a page of text and a facing page of very clear explanatory drawings. Most of the raw materials required are common products of the woods and fields or things easily obtained about the home. A good many of the ideas are drawn from or adapted from our American Indians.

#### ANIMAL HIDE AND SEEK

By Dahlov Ipcar, William R. Scott, Inc., New York, N. Y., 1947.  $8 \times 10$  inches, 40 pages, illustrated. \$1.50.

This is primarily a picture book for little children. It consists of a series of colored drawings and various outdoor habitats in which animals are placed in such a way that their protective coloration or markings make them hard to pick out. The simple text that goes with each group of pictures tells facts about the animals that would be of interest to a small child.

#### WILD BIRD NEIGHBORS

By Alvin M. Peterson, Wilcox & Follett Co., Chicago, Ill., 1947.  $6 \times 9$  inches, 298 pages, illustrated with photographs. \$2.50.

Children will find this an excellent introduction to the birds of any locality in the mid-West or Northeast. In a series of short chapters, Mr. Peterson discusses 35 of our commonest birds. He has made good use of the abundant data that is now available on feeding habits and other aspects of the lives of birds but has kept his accounts very readable by basing them in large part on his own personal experiences in the field.

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# LETTERS

## From the editor:

THERE'S nothing like a stimulating visitor to give the editorial department a new lease on life. Yesterday afternoon Roger Tory Peterson drifted in to tell us about his recent visit to 35 states. He met bird people everywhere and was full of their praises. "A trip like that makes you realize what a wonderful group we have and what fine work the members of local Audubon Clubs are doing in this country," he said.

We were glad to get from him a first-hand account of the Seattle Audubon Club and to learn that its members are still waging a valiant battle in defense of hawks. An effective tool in the campaign has been the leaflet entitled "The Truth About Washington Hawks" written by Ellsworth D. Lumley. The leaflet points out how the State Game Department (whose responsibility it is to see that Washington wildlife is protected) violates the very laws it is supposed to enforce. Since many clubs elsewhere have similar problems, it might be helpful if you asked Mr. Lumley (6224-25th Street, N.E.) to send you a copy of the leaflet.

THE American Ornithologists' Union is collecting food and clothing for European ornithologists, and wants your help. Names and addresses of needy scientists have been compiled by Margaret Morse Nice and Joseph J. Hickey.

For information about how to send food write to Mrs. John T. Emlen, Jr., 2621 Van Hise Avenue, Madison, Wisconsin. If you have clothing, get in touch with Mrs. F. N. Hamerstrom, Jr., at the Edwin S. George Reserve, Pinckney, Michigan.

Some of these Europeans have bird paintings and embroidered sweaters, socks, mittens, etc., for sale. Perhaps some of these items would make delightful Christmas gifts. Mrs. Hamerstrom will be glad to furnish you with information about what is available and how to order.

IF you've never seen an exhibition of Peter Scott (page 259) originals, you have a great pleasure to look forward to. He's a master of mood and atmosphere and his birds seem to fly free in the air—as if they didn't even touch the canvas. Lovely as are the black and white reproductions shown in this issue, they can give you only a hint of what the originals are like.

Mr. Scott is now at work on "A Monograph of the Wild Geese" to be published in four volumes, and a companion fifth volume "A Monograph of the Wild Swans." The volumes are to be crown quarto in size and each one will contain 30 plates in color and from 200 to 300 photographs by out-

## WANTED: Secretary for Editorial Department

IT'S A FINE JOB for the right gal, but you must be a fast and accurate typist and at least fairly good at dictation.

You should know the difference between a blue jay and a bluebird. (Get it? The first is spelled as two words, the second as one.) Such details are important in preparing a manuscript for the printer and in proofreading. The A.O.U. Checklist and Webster's Dictionary and a Style Book will be on your desk for ready reference—but it is surprising how few people have learned the habit of using such editorial tools!

You must be good at detail—an editorial office is like a 3-ring circus, with a lot going on in each ring simultaneously. But once you master the routine, you have an opportunity to learn layout and production, editing, research, and develop your writing ability if you have a talent that way.

standing bird photographers all over the world. Mr. Scott urges that naturalists and sportsmen everywhere cooperate by submitting photographs and information. For particulars about how to collaborate on this project write to him at 8 Edwardes Square, London, W.8, or care of Charles Scribner's Sons, 597 Fifth Avenue, New York, New York.

JOEL HEDGPETH (page 266) is Marine Biologist with the Texas Fish and Oyster Commission, and stationed in Rockport. One of those rare souls with talents in every direction, he is scientist, painter, singer (trained for concert work), actor, writer and wit. (He plays the harp, too, although he's far from angelic!)

As a writer, he can overwhelm you with "abstruse opuscles" (his phrase) like the one entitled "On the Evolutionary Significance of the Pycnogonida," published by the Smithsonian Institution; or delight you with a piece like "Redwoods."

When I met Joel at the Wildlife Conference in San Antonio last year, I wept on his shoulder when I discovered that he was the author of a choice essay on Thoreau entitled "A Hundred Years in the Woods" which was published in the 1945 Autumn issue of *The Land*. Why, oh, why, didn't you sent it to me? I cried.

"Because I thought *Audubon Magazine* was just a place for birds," he said without even blinking an eye! Now he knows better. "Redwoods" is part of a book he is writing which has, as its general theme, the changes in California since the gold rush. (Joel is a native Californian, his parents were born in California, and his great grandfather was a 49'er).

VIRGINIA ORR (page 274) started out to be a bio-chemist, then escaped to sail a cutter from Florida to Maryland and finally on to Maine. During the war she worked in a war plant, drove for the Red Cross, raised a robin, two sparrow hawks and a flicker. Last spring she birded in New Mex-

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## THANKS!

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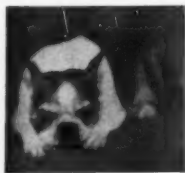
ico and Utah, and then went to Labrador where she photographed plants. "Since then," she adds, "I have spent my time birding, fox-hunting and trying to become a professional author."

**ERIC W. BASTIN** (page 272) is a Canadian who does nature work with Boy Scouts and other youth groups. He attended the Audubon Nature Camp in Maine last summer.

**ALAN DEVOE's** (page 277) latest book, "Speaking of Animals," will be published by the Creative Age Press in October. It contains thirty biographical studies of animals, and essays on various aspects of animal life. Most of the forty illustrations in the book are from the photographic files of the National Audubon Society.

**AND** speaking of letters! Connie Hagar's fan mail has been tremendous. And her long distance telephone calls have come from places as distant as North Dakota. Here's something that will surprise you—Patch *almost* stole the show from the birds. Who would have guessed that almost every bird-lover is a push-over when it comes to dogs?

Patch, too, has had his share of fan mail—and we reprint one letter here to prove it:



Dear Patch:

You are quite a handsome fellow, but it's your knowledge of birds that interests me most. Did you have to learn the *hard* way? Last spring, I had to sit *still* for hours

watching warblers—with a Peterson guide to my right and a Pough-Eckelberry guide to my left. One wave just about finished me—yet you live through wave after wave!

Connie sent us some letters in which her friends say they always enjoy talking over the latest bird news with you. I hope to meet you soon—I'd like to hear your impressions of those gawky-looking pelicans. Perhaps we could take a birdwalk together one of these days?

Your admiring friend,

Bootsie

P.S. I enclose a snapshot. They say I'm photogenic too.

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Yes, Miss Kilgallen, we forgive:

Dorothy Kilgallen, in her column in the New York JOURNAL-AMERICAN, recently wrote as follows:

I wonder why birds' names are so appealing to the gentlemen who choose names for restaurants and night clubs? There doesn't appear to be any direct connection between our feathered friends and the gourmet or playboy (surely no cafe owner wants patrons who eat like birds!) but the fact remains that many a bird has attained a kind of late-hour immortality via the night spot route. There's the Stork, most famous of them all, the White Turkey Inn, the Blue Goose Tavern, the Coq Rouge, the Flamingo, and the Chanticleer in Baltimore. There's the Gamecock, the Bird in Hand restaurant, and the Drake Room.

The Town Penguin plugs those little birds in dinner jackets as consistently as it advertises its delicious curries.

For all I know, there may be even more eateries named after birds. If I have omitted any, I pray the Audubon Society will forgive me.



**To the editor:**

"WHEN Juniors Come Rolling In" remind me of the days when I was going to school in a little town in Vermont. The teacher gave us the Audubon leaflets and that is when my interest started in birds. When we moved to Maryland, I again joined the bird club at school. The Junior Club leaflets help many children to learn about birds. Your magazine is just swell and I enjoy it more every copy I get.

Mt. Airy, Md.

PHYLLIS G. PARLEE

I HAVE subscribed to *Bird Lore* since around 1920, and I wish that *Audubon Magazine* could recapture some of the excellence of its predecessor, *Bird Lore*, as edited by Drs. Chapman and Allen. As it is now issued, it is in no way scientific (such as the *Condor* or *Auk*) and it has seemed to be striving to be such a "popular" organ that, to me, it has reached a fusing point of becoming rather a combination Wee Wisdom, some publication of the S.P.C.A., a Normal School Teachers' Yearbook and a bird magazine for tiny tots with National Geographic captions under the photographs. Have you not still a large adult circulation? What has become of the former fine photographs by Cruickshank, Grimes, Allen, etc.? The reproductions of the pintail photographs in the March-April issue

were very close to a disgrace for a magazine with the traditions of *Bird Lore*. Yet your grade of paper is excellent.

Maybe you have readers that eat the stuff up; if so, I suppose the policy is "why change?" But this present book, as it has been coming out the last couple of years, is sad medicine to those who remember *Bird Lore* in the 20's and 30's.

JACOB B. ABBOTT

Haverford, Pa.

THE article "How's your Nature Vocabulary" by Alan Devoe which appeared on page 106 of the Mar-Apr issue was of intense interest not only to ourselves but to our two boys, ten and twelve.

I am wondering if this would not prove a valuable asset if made a regular feature? The educational and entertainment appeal are unquestioned and anything that will draw both an adult's and a child's interest to this field is well worthwhile.

Our boys are looking hopefully for another nature "quiz."

MARY MUNROE

Miami, Fla.

YOUR magazine is very interesting and enjoyed by folks old and young.

BLANCHE MCKIMMEY

Washington, D. C.

## Your Favorite Print

You may have again your last year's AUDUBON Christmas card portraying the beautiful Cedar Waxwing, plate #43, reproduced in color from "Birds of America." Order early while our limited supply is still available.



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YOUR March-April "Brainbreakers" was pretty good. However, I had turnstone for No. 9, and the oyster-catcher found a place on my ball team.

R. A. CURTIS

Golfstown, N. H.

I THINK your magazine has improved greatly during the past year. It is becoming a must with conservationists.

GALE MONSON

Parker, Arizona

## Reprints Available

BIRD CONSERVATION PROBLEMS IN THE SOUTHWEST PACIFIC. 4 pp. 5¢

By Ernst Mayr. (Few Americans are aware of the great and immediate threat to the endemic species of Pacific Islands—send this reprint to your friends at home and abroad in an effort to awaken them to the problem and the need to do something about it.)

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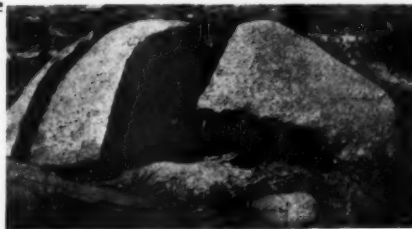


Photo by Dorothy A. Trent

Granite boulder split by frost

## Behind the scenes at Audubon House

WHEN you cross the threshold at One Thousand Fifth Avenue, you feel at home. There are Jaques paintings and Peterson prints on the soft green walls, but it's the witchery of Mildred Finney's smile that wins you.

Past the entrance hall, there are prints and books, greeting cards, bird trays and trinkets, bird houses, feeders and all the rest that go to make up what we call the Service Department. Mrs. Finney and her assistant, Mrs. Sally Boone, will show them to you, will sell them to you, or let you browse to your heart's content.



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**DICK BORDEN** has just picked up the telephone to report to Douglas Orbison, Membership Secretary, on a batch of \$200 Life Memberships that Mrs. Marion Lingane is holding in her hand. As our new Promotion Manager, Dick has been flooding the mails with letters that explain the Society and its work. You won't be able to appreciate the *real* Dick, however, until you see him in the field photographing flying ducks with that

"camera gun" of his—a slow-motion contraption of his own invention which will soon be available for sale.

**ANN SCULLY** is the dynamo behind the School Nature League Bulletins. Published 10 times a year, those Bulletins are a boon to teachers, writers, broadcasters and all others who have occasion to use nature information. Quite aside from her job, Ann is one of those personalities who holds Audubon House together with her talent for friendship.

**Photograph of Ann Scully  
by Gene Heil  
Other photographs  
by Stewart Merk**





WE had planned to take Nell Di Lanty's picture as she stood on the stepladder reaching for a book. But then that whirlwind Wayne Short, blew in and swept her off her feet! Looks like a shot out of Hollywood now—wouldn't you say so?

The subject of conversation is a painting of mockingbirds by Don Eckelberry—one of 65 paintings by various artists which will be on sale at our October convention. The money from this sale will help defray the cost of framing the traveling art exhibits which will be available to clubs and about which details will be announced later.

As librarian, Nell has found out all kinds of things about our Library that we didn't know before. It is admitted to be the best ornithological library in existence, and Nell is sparkling with ideas for making it also the most useful. That means that some good angel will have to help out with the project. Any angels in the audience?

Nell is also an expert on exhibitions and on Auduboniana and was, for seven years, at the Audubon Memorial Museum in Henderson, Kentucky.

Managing art exhibits and selling paintings are sidelines with Wayne—an occupation for the 24th hour in the day—the other 23 are devoted to Screen Tour Lectures and their audiences of 500,000 in 104 cities and in 33 different states and the provinces in Canada!

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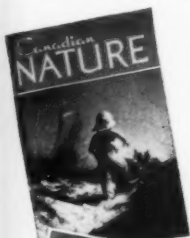
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## "MUSTS" FOR YOUR NATURE LIBRARY

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**NATURE ACTIVITIES. 50 cents.** A practical, usable handbook for teachers, students, librarians, camp counsellors and others interested in nature and conservation. Chapters on the organization and leadership of indoor activities and field trips, the making of collections, exhibits and classroom museums, instructions for nature arts and handicrafts, and hundreds of definite activity suggestions, arranged seasonally week by week throughout the year. Profusely illustrated with photographs and 172 drawings. 64 pages.

**WILD FLOWERS. 50 cents.** Contains fifteen beautiful reproductions in full colour of favourite wild flowers, painted for Canadian Nature by Barrie Bennie, noted Canadian artist.

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